AN ABSTRACT OF

An Address

ON

SOME ANCIENT METHODS OF TREATING FEVERS.

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GENTLEMEN,—While seeking for a subject for my paper which might possess some slight amount of interest for you, I discovered how difficult it was to avoid the repetition of matters with which you are already more or less familiar. Any new theory in medicine which is of less than fleeting importance you are of course intimately acquainted with, and I felt that it was quite hopeless to say anything very new or very original about such a well-known subject as the modern treatment of fevers. You of course know all about the reduction of temperature by various hydro-therapeutic methods, by polarisation of the heat centre in the optic thalamus, and by the use of such drugs as phenyl-dimethyl-iso-pyrazolone (I might perhaps mention that this drug has another name, and that that name is "antipyrin"). But the views of some of the older physicians may perhaps be less well known to you, and it always seems to me that there is in medicine nothing so interesting as the tracing out of the development of modern views and modern methods.

The earliest practitioners of medicine of whom we have any authentic information were the Asclepiadæ, an order of priest-physicians which traced its origin back to a mythical personage bearing the distinguished name of Æsculapius. It was some generations after this time that Æsculapius was deified and that Temples of Health were erected in various parts of Greece, usually in the neighbourhood of medicinal springs, the virtues of which would no doubt contribute greatly to the cure of the sick, and in addition it is believed by many at the present day that the aid of animal magnetism was called in to contribute to the cure. Certain it is, however, that whereas the modern hypnotists administer medicines which are suggested to the imagination of patients during a state of clairvoyance the Asclepiadæ prescribed drugs as indicated in dreams.

The oldest documents which we possess relative to the practice of medicine are the various treatises contained in the collection which bears the name of Hippocrates. Hippocrates lived, as you know, during the latter half of the fifth century B.C. and from his youth up he was familiar with the principles of medicine, both in the abstract and in the concrete, his own remarkable powers of intellect helping to raise him to that extraordinary eminence which his name has attained in all ages. Hippocrates commenced the practice of his art in the Asclepion of Cos, as his forefathers had done before him; but he afterwards left the land of his birth and travelled widely, adding considerably to an experience already great. Greatly as his teachings differ from those of modern days, there is still much truth underlying them as the following extract will show: "Ardent fever takes place when the veins, being dried up in the summer season, attract acrid and bilious matters to themselves and strong fever seizes the whole body, which experiences aches of the bones and is in a state of lassitude and pain. It takes place most commonly from a long walk and protracted thirst, when the veins being dried up attract acrid and hot defluxions to themselves. The tongue becomes rough, dry, and very black; there are gnawing pains about the bowels, the alvine discharges are watery and yellow, there are intense thirst, insomnolency, and sometimes wandering of the mind. To a person in such a state give to drink water and as much boiled hydromel of a watery consistence as he will take and if the mouth be bitter it may be advantageous to administer an emetic and clyster; and if these things do not loosen the bowels purge with the boiled milk of asses. Give nothing saltish nor acrid, for they will not be borne, and give no draughts of ptisan until the crisis be past. ..... When the bowels are loose during the whole course of fevers, in this case we are most especially to warm the feet and see that they are properly treated with cerates and wrapped in shawls, so that they may not become colder than the rest of the body. In those cases of fever where the bowels are loose and the mind is disordered the greater number of patients pick the wool from their blankets, scratch their noses, answer briefly when questions are put to them, but when left to themselves utter nothing that is rational. Such attacks appear to me to be connected with black bile." In his treatment of fever patients Hippocrates seems to have been pretty shrewd, as the following quotation shows: "It is also disgraceful not to recognise a patient whose debility is connected with inanition and to pinch him in his diet; this mistake, indeed, is attended with some danger, but much less than the other, and yet it is likely to expose one to much greater derision, for if another physician or a private person, coming in and knowing what has happened, should give to eat or drink those things which the other hath forbidden the benefit thus done to the patient would be manifest. Such mistakes of practitioners are commonly ridiculed by mankind, for the physician or non-professional man thus coming in seems as it were to resuscitate the dead." After extracts such as this we no longer wonder at Hippocrates being a successful physician. Nowadays it is quite a common practice to administer food, either farinaceous or as beef tea, after the bowels have been evacuated either by purging or by diarrhœa. Hippocrates, however, forbids food to be given at such a time, since the body, being weakened by depletion, is unable to digest it properly, and consequently what is given as a support to the frame proves a load to it. Galen, Nicander, and other physicians add as an additional argument that the vascular system having in such cases been emptied greedily absorbs the food before it is properly digested. As regards the use of the bath in fevers Hippocrates holds that "in general it suits better with cases of pneumonia than in ardent fevers; for the bath concocts the sputa, improves the respiration, and removes lassitude; it soothes the outer joints and skin and is diuretic, removes heaviness of the head, and moistens the nose. The use of the bath is much more appropriate to those who take unstrained ptisan than to those who take only the juice of it, although even in their case it may be proper; but least of all does it suit those who only take plain drink, although in their case, too, it may be suitable." This ptisan seems to have been a sovereign remedy in fevers and it apparently differed little from the decoction of barley now in use. It was prepared from pearl barley roughly pounded and boiled for a time in water, and was given to the sick either strained or entire according to circumstances. Hippocrates says that "if one do not pay proper attention to the mode of administering the ptisan much harm may be done; for when the food is shut up in the bowels, unless one procure some evacuation speedily before administering the draught, the pain, if present, will be exasperated, and if not present it will be immediately created. In general one should do this: if fever commences shortly after taking food and before the bowels have been evacuated, whether with or without pain, the physician ought to withhold the draught until he thinks that the food has descended to the lower part of the belly; and if any pain be present he should use oxymel, hot if it is winter and cold if it is summer, and if there be much thirst he should take hydromel and water. The time for administering the draught is to be particularly observed at the commencement and during the whole of the illness; when, then, the feet are cold one should refrain from giving the ptisan, and more especially abstain from drink; but when the heat has descended to the feet one may then give it; and one should look upon this season as of great consequence in all diseases and not least in acute diseases, especially those of a febrile character and those of a very dangerous nature. One may first use the juice and then the ptisan, attending accurately to the rules laid down." Cooling drinks have always been largely used in the treatment of fevers, and Galen states that, on the principle that diseases are to be cured by their contraries, as the essence of a febrile disease is combined of heat and dryness, the indication of cure is to use means of a cooling and moistening nature, and that the ptisan fulfils both these objects.

At a slightly later period than Hippocrates, Asclepiades, a physician who acquired a great reputation in Rome about 100 years B.C., adopted a masterly method of inactivity in

the treatment of fevers. An admirable criticism of his methods has been made by Celsus, and I can hardly do better than quote from him: "Asclepiades banished all internal medicines, yet he ordered clysters in every case, although not so repeatedly; but he professed to use the fever itself as the chief remedial agent of its own cure. For his opinion was, that the strength of the patient required to be weakened by light, by watchfulness, and by thirst so intense that he did not even suffer the mouth to be rinsed. Hence they are the more deceived who conceive his practice to have been agreeable in all respects. For, it is true, on the latter days of illness he sanctioned the luxury of the invalid; but in the first he played the part of a torturer. Asclepiades, when for three days he had wearied out his patient by every expedient, allotted the fourth day for food. Now, in truth, the best medicine is food seasonably administered; the question is, when ought it to be given? There is one thing which may be observed at all times and in all countries: the physician being in constant attendance ought to regard the patient's strength, and so long as there is a sufficient surplus he should contend by means of abstinence, but directly he perceives imbecility he should afford nourishment." Surely nothing could be simpler than these directions, but when it came to ordering a definite diet for his patients Celsus appears to have been on less sure ground. He divided foods up into those whose juice is good and those whose juice is bad and then again made distinctions between "mild" articles of diet and those which "generate a thicker phlegm" and those which are "calefacient." Some of the remedies which he prescribed sound rather formidable, such as "malagmata," "acopa," which he says are good for the nerves, and "catapotia."

Such are some of the earliest views of the treatment of fevers of which we have any record, and one would no doubt be inclined to think that these methods would soon have been improved upon and altered for the better. Very little change, however, seems to have taken place even during a long lapse of years, and as late as the seventeenth century considerable doubt seems to have existed as to the proper way of treating fevers. Dr. Thomas Willis, who was Sidley Professor of Natural Philosophy at Cambridge in 1684, describes most carefully in a large monograph his theories of the pathology and treatment of fevers. The blood, it seems, can be resolved into five elements. "1. Spirits (which readily obtain the chief place) are a subtle and greatly volatile portion of the blood. The liquor of the blood continually boils up with their effervescency or growing hot, and equal expansion in the vessels, and the rest of the Principles are contained in an orderly motion and within the bond of the exact mixture; if any Heterogeneous thing, or unagreeable to the mixture, be poured into the bloody mass, presently the Spirits being disturbed in their motion, rage, shake the blood, and force it to grow hugely hot, until what is extraneous and not miscible is either subdued and reduced, or cast out of dores. 2. That there is plenty of Sulphur in the blood it is plainly seen, because we are chiefly fed with fat and sulphureous Aliments, also the Nutriment from the blood, carried into the solid parts, goes into Sulphur and Fatness. 3. That salt is in the blood is evinced by the Salt; which, though fixed, is drawn forth by being eaten from vegetables and from other eatable things. 4. Besides, there are in the blood (as it is a thick Humour, and hath a gross consistence) many Earthy particles, and from the Terrestrial Particles of the blood, and Nutritious Juice, the bulk and increase of the Body proceeds. 5. Upon the watery part of the blood depends its fluidness; for from hence its stagnation is hindered and the Blood is circulated in the vessels without growing thick or stiff; also its too great conflagration and adustion is restrained and its heat attempered." Such is Willis's account of the composition of the blood and we must admit that it differs somewhat from modern histological teaching, though if for "earthy particles" we read "corpuscles" and omit "spirits," at least except under pathological conditions, the difference becomes less marked. As regards the pathology of fevers, "it plainly appears, even to the Sense, that the Blood doth hugely boil up and rage in a Feaver; for every one (though rude and unskilful) being in a Feaver, complains of the blood becoming distempered, and of the same growing hot in the vessels, and, as it were, put into a fury. Also, besides the blood raging in the veins and arteries, it may lawfully be suspected, that that Juice with which the Brain and Nervous Parts are watered, is wont oftentimes to be in fault, for when this liquor is carried back from the blood, it is probable, if by reason of a taint contracted from the Blood, that humor is depraved in its disposition, or is perverted from its equal motion, that from thence the Rigor, and Pain, Convulsion, Delirium, Frenzy, and many other symptoms of the Nervous kind, usual in Feavers, do arise." Such no doubt was the pathology of the following interesting case. "This Noble Lady, through transpiration being hindered, fell into a putrid Synochus; the Effluvia, wont to be evaporated through the Skin, being retained within (together with the Choler flowing out of the Choleric vessels) and fixed to the Viscera, did overthrow the dispositions of their parts, and especially gave trouble to the Stomach, and raised up pains and Convulsions in the parts filled with Muscles and Membranes: the Pulse was unequal and intermitting, not because of the malignity of the disease, but by reason a certain proper disposition of the heart, by which indeed its ferment being not well constituted, the Blood growing fervent, is not presently equally enkindled, and wholly leaps forth. On the eighth day a plentiful Sweat, with all things requisite to a good Crisis followed, and perfectly cured the Feaver, because (as it ought to be) those three things went before this critical evacuation: viz., first, a full and sufficient deflagration of the blood, as appeared by the very strong heat, and plainly fiery, continued for three days before; secondly, a congestion of the adult matter to a plenitude, as was collected by the high disquiet and tossing about the preceding night; and, thirdly, a certain Concoction or Pepasmus of the same matter." Well, the patient recovered and I trust that the above reasons for her recovery appear quite satisfactory to you. The treatment of fevers practised by Willis seems to have been rather radical, though he did not place much reliance on drugs. "At the first beginning of the Disease, the business will be that the Feaver may be presently suppressed, and the inflammation of the heated sulphur may be inhibited; to which the opening of a vein doth greatly conduce, by this means the Blood is eventilated, and the heated particles, too much heaped together, and almost ready to be fired, are dissipated one from another; as when hay, apt to burn, is exposed to the open air, its firing is prevented. When the Feaver is augmented, if the Blood be too hot, and distends the vessels too much with a vehement and strong Pulse; if Watchings, a Phrensie, or a pain of the head cruelly urge, the letting of blood may be again repeated. Let the Diet be sparing, of the most slender Aliments, also Drink small and plentiful, that the blood may be diluted with a more plentiful Serum. Clysters are administered safe enough and in truth commodiously, but Medicines, whether Catharticks, or Diaphoreticks and which too much exagitate the blood, are to be shunned with the same industry as blasts of Wind to burning Houses. In the declination of the Feaver, when after a perfect Crisis, Nature is stronger than the Disease, the business goes well, nor is there much business left for a Physician. It only remains to propose an exact manner of Diet, that the sick may soon recover Strength without fear of relapsing: also it is requisite to exterminate the Reliques of the feaverish matter with a light purgation." Some of you may be of opinion that considerable advance has taken place since Willis's time in the treatment of fevers and I venture to think that there are not many nowadays to recommend the use of amulets, though Willis had much to say in their favour. "Amulets hung about the Neck, or borne on the Wrists, are believed to have a wonderful force; of these, among some of the greatest esteem, are such as are made out of Arsnick, Quicksilver, the Powder of Toads, and other poisons. That the same in this case may be profitable, besides the observations of Physicians, this reason may seem to persuade something. The Effluvia, or Atomical little Bodies, emerging now from these Bodies, now residing upon these, are before affirmed to fly about through the whole region of the Air; some of them easily cohere with others, but if they strike against some of another form they oppose and overturn them; hence the particles of the pestilent infection, which are adverse to our spirits, excellently agree with those little Bodies of Poyson placed near, and are readily fixed to them; wherefore the Amulets made of Poyson do this. They receive the seeds of the Pestilence meeting us, into themselves, by reason of the likeness of parts; also by alluring the same from our bodies into their embraces, they in some measure free the infected from the infection."

I have dealt at some length with the writings of Willis partly because his views may be considered fairly typical of those generally held at the latter half of the seventeenth

century and partly because he lived at a time when many of the older ideas on the treatment of disease were undergoing change. Moreover, his style of writing is somewhat clearer than that of some of his contemporaries as the following translation from Bauderon shows: "The Humours may bee inflamed without putrefaction and cause a continual Feaver, which hath but one Fit, and that longer than a Diary, whose four times are taken from its essence and from the matter, viz. (the fervid blood hurting our actions) whether it be homotonous, epacmastical, or paracmastical." Bauderon's prescription for "a cooling Glister" is more distinct: "Take of violet leaves, Mallows, Lettice, Gourds, Burrage, each a handful, Prunes sixteen, of the four great cold Seeds each two drams, red Poppy-flowers and Roses, each a small handful, boyle them in Whey or Water to a pint, streine it, and dissolve of Diaprune simple, and Cassia newly drawn, each six drams, honey of Violets and oyl of Water-Lillies, each an ounce and half, or so much of oyle of Cammomel if it be not exquisite, and make a Glister." You will notice that practically all the substances used for the glister are aromatic bodies, apart from any other properties which they may possess. The preface to Bauderon's book, "The Expert Physician," from which these extracts were taken is perhaps worth quoting as an example of how it is possible to err on the side of modesty: "Such emunct nostrils as shall snuffe at it are like those my Author speaks of that will swound at the smel of a Rose; suburban wits that breathe best in the worst Air; or like some unclean Creatures that thrive best in standing Pools; but I leave them and commend the ingenious to the work itself, methodical, facil, and perspicuous enough to benefit the meanest capacity, yet satisfie the highest; read and be convinced."

The practice of bleeding in fevers seems to have been favoured from the earliest times, though Galen recommends that it should not be practised in patients under 14 years of age "because children's bodies be soone resolved from outward heate, and therefore by voyding of blood they should bee greatly weakened." Some authorities have considered certain days in the year unlucky for bleeding—more especially the first day of May, the last day of September, and the last day of April, and there are also many other criteria which render the patient unsuitable for bleeding. Such for instance is "subtile sensitiveness of the stomack's mouth, which is called the heart-string," according to the School of Salerno in the seventeenth century, "for of such blood-letting swounding followeth lightly." In fact, the dangers which attended it in the old days seem to have been very considerable and Celsus states that "although blood-letting is the easiest of all operations to one practised in it, nevertheless to the unskilful it is exceedingly difficult, for the vein is in apposition with arteries and these last with nerves. If, therefore, the lancet should touch the nerve convulsions ensue and miserably destroy the man."

Such, gentlemen, is a short sketch of the treatment of fevers up to the end of the seventeenth century, and I leave it for you to judge how far this treatment has improved since the time of Hippocrates.

I feel that I cannot do better than conclude with a quotation from this the earliest physician whose writings have come down to us—a quotation which will remain true for all time: "Life is short, and the Art long; the occasion fleeting; experience fallacious, and judgment difficult."

THE ARREST OF PULMONARY TUBERCULOSIS.[1]

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IT is unnecessary nowadays to insist that tuberculous disease of the lungs frequently undergoes arrest; the fact is admitted by all and is the common knowledge of the reader of any up-to-date magazine. It was not, however, always so, for I can recall the time when such an event was believed even by well-informed members of the profession to be only of the most rare occurrence and when one was not infrequently asked, Do you ever really cure a case of consumption at Brompton? To this question I have generally replied in the words of Laennec, "The cure of tuberculous phthisis is possible to nature; it is certainly not yet so to medicine." In medicine, as in other sciences, it is well from time to time to recall the past and to mark the steps by which we have advanced to our present state of knowledge and such a retrospect on the subject of the arrest of pulmonary tuberculosis may not be without interest.

Let us consider for a moment the reason for this change of view with regard to the curability of "phthisis." It is certainly not because of the discovery of some drug which will effect this result, for we know of none. It is because truth as to the pathology of the disease has displaced error and because now when we speak of "pulmonary tuberculosis" all men know what we mean, whereas formerly when one spoke of "phthisis" only the speaker knew (or thought he knew) what he meant. So long as a positive clinical test for the presence of tuberculosis of the lungs was lacking those physicians—and they were neither few nor obscure—who believed in the existence of the conditions variously termed "catarrh of the apex," "congestion of the apex," and "the pre-tuberculous stage of phthisis," regarded every case of the kind in which the symptoms and physical signs disappeared and the patient regained health as an additional proof of the soundness of their belief in the non-specific nature of the affections. They rarely observed the arrest of consumption because if the patient got well it was almost certain that he could not be suffering from consumption! When, however, owing to the researches of Koch it became possible to apply such a test, the falseness of this view was speedily demonstrated, and to-day the discovery of tubercle bacilli in the expectoration is accepted by all as a proof of the presence of tubercle in the lungs.

PATHOLOGICAL RETROSPECT.

The literature of the subject of tuberculosis from the time of Laennec to the date of Koch's memorable discovery of the tubercle bacillus in 1882 is a history of truth discerned by the unaided senses of a master mind, deduced from accurate and laborious pathological observations, clearly set forth and verified by a wide clinical experience, subsequently becoming obscured owing to the too great reliance of later writers upon the minute anatomical details of morbid structures, as revealed to them by the aid of the microscope, as a test of a tuberculous lesion. Driven from one point to another in their search for some microscopical appearance distinctive of tubercle they were led to deny the influence of a specific virus in the production of the lesions of "phthisis pulmonalis." The description of those lesions given by Laennec is, so far as it goes, striking in its accuracy and marks him as one of the greatest of pathological anatomists. No less accurate were his views upon such questions as the rôle of ordinary inflammation in the pathology of tubercle; of the influence of "a neglected cold" in the etiology of phthisis; and the relation of pleurisy to tuberculosis of the lungs—questions which long after his time continued to perplex the minds of pathologists and to which, indeed, we have only lately been in a position to give something approaching to a final answer.

At the time when I began the study of medicine the majority of my teachers were under the baneful influence of the views of Niemeyer, who took credit for having gradually emancipated himself from the teachings of Laennec. What Niemeyer's views were will be readily seen from the following brief extracts from his work.[2] "We must emphatically express our dissent from the theory that caseous infiltration of the lung, with its concomitant formation of vomicæ, has its source in *a primary inflammation of a peculiar nature* which is distinguishable from the varieties of pneumonia." "The consolidation and destruction of the lungs which form the anatomical basis for consumption are usually the products of inflammatory action and the greater the quantity of cellular elements collected in the vesicles and the longer the duration of the inflammation, so much the more readily will *pneumonia lead to consumption* ....." And again "we have no hesitation in saying that the greatest danger for the majority of consumptives is *that they are apt to become tuberculous*." Truly Laennec is revenged upon those who rejected his gospel.

Students in my day were duly instructed as to the varieties of "phthisis," and I can still recall my hopeless attempts

[1] A lecture delivered at the Brompton Hospital on June 7th, 1899.

[2] Text-book of Practical Medicine (Translation), vol. i., pp. 209, 211, 215.

to differentiate "tuberculous phthisis" from "catarrhal phthisis" and "pneumonic phthisis," whether acute or chronic, confluent or disseminated, from the tuberculous or tuberculo-pneumonic variety. The relation of fibroid phthisis to chronic phthisis was a special puzzle and the supposed existence as separate species of the disease of bronchiectatic, diabetic, miner's, collier's, knife-grinder's, and syphilitic phthisis completed one's state of bewilderment. We were taught that acute tuberculosis of the lungs was a different affection altogether from phthisis and yet in the post-mortem room it appeared to be not infrequently associated with it. As my pathological experience increased I was led to range myself with those who held Laennec's view of the "unity of phthisis," and it is some consolation now to know that one's failure to recognise all these separate varieties of the disease was owing to the fact that they did not exist.

Laennec had no doubt as to the possibility of phthisis undergoing arrest in the stage of cavity, and he cites several cases of the kind, generally under the heading "Ulcers of the lung cured by their transformation into semi-cartilaginous fistulæ." He was not quite so clear as to the exact mode of production of the pigmented, fibroid, calcareous, and cicatricial lesions frequently found at the apices of the lungs in patients dying from the most varied diseases. He states[3]: "Nothing is more common than to find on the dissection of those who have died of diseases unconnected with the thoracic organs a small number of tubercles, sometimes rather voluminous, disseminated through a pulmonary tissue otherwise entirely healthy and some of which are already softened or excavated. Nothing having announced in these cases the existence of tubercles we ought, I conceive, to conclude *that the same thing must often happen in individuals enjoying excellent health*, and then the softening of the tuberculous matter and its evacuation, either by the bronchi or by the action of the absorbents, must be followed by a cicatrix, commonly too small and too similar in texture to the pulmonary tissue itself to render it possible to distinguish it easily, especially at first sight and without that patient exploration which those who undertake to examine whilst influenced by unfavourable prepossessions are unwilling to bestow." It is clear from the foregoing that Laennec believed these to be tuberculous lesions, but I do not think that we can justly credit him with having recognised the fact that a tuberculous lesion may undergo fibroid transformation without the occurrence of softening.

From 1879 to 1886 I kept careful records of all the cases of arrested tuberculosis met with in the post-mortem room of the Middlesex Hospital, during which period I held the post of pathologist to the hospital. These cases were subsequently published in a work entitled "Arrested Pulmonary Tuberculosis" (1891). In 1943 necropsies obsolete tubercle was found in the lungs in 177 cases (Series I.), or 9 per cent. No case was included in this series in which death was due to pulmonary tuberculosis. In a second series of 19 cases it was shown that death occurred from acute tuberculosis of the lungs, similar obsolete lesions being present therein, and that such lesions were the source of infection. In a third series of six cases it was shown that similar lesions may give rise to tuberculosis of organs other than the lungs. The fourth series of 17 cases constituted another link connecting such obsolete lesions with pulmonary tuberculosis, from the fact that they were found in cases fatal from that disease, the appearances met with on post-mortem examination admitting of no other interpretation than that the morbid process had at one time been in a condition of arrest. Finally, it was shown that in some arrested lesions of this kind tubercle bacilli may be found. I also pointed out that in nearly all of the carefully recorded cases of "cured phthisis"—i.e., cases recognised as such during life, observed for many years, fatal from some non-tuberculous affection, and submitted to post-mortem examination—the lesions found in the lungs corresponded in all respects with those described in Series I. The case of Sir Astley Cooper may be recalled as an illustration of this fact. He left directions that his body was to be examined after death with particular regard to certain points, one of which was "some suspected indications of phthisis in his youth." He is believed to have had an attack of hæmoptysis for which he bled himself. The result of the examination was that "at the superior and posterior part of the right lung there was a small depressed and somewhat contracted surface about the size of a sixpence, a section of which exposed a calcareous mass, very uneven upon its surface and about equal to the size of a small pea. It was placed about three lines distant from the pleura." There is, I imagine, nowadays no one who doubts that these lesions are really evidence of an arrested tuberculosis. It was, however, objected at the time that I published the cases just referred to that although the lesions might be tuberculous the cases had never been clinically examples of "phthisis." This may be at once admitted if by "phthisis" is meant a clinical condition characterised by cough, fever, night sweating, wasting of the body, &c., but the contention of Laennec and of all who accepted his views has always been that phthisis is tuberculosis of the lungs and nothing else. It is a contention no longer, for it takes two to make a quarrel and there is now no one with whom to contend.

Dr. Sidney Martin[5] has also recorded his experience obtained in the post-mortem room of the Middlesex Hospital in 1890–91. In 445 consecutive necropsies he found obsolete tubercle in the lungs in 42 cases = 9·4 per cent. Heitler[6] in the records of 16,562 necropsies performed at the Institute of Pathological Anatomy of Vienna from 1869 to 1897 found 789 cases (= 4 per cent.) in which obsolete tubercle was present in the lungs. It will be seen that Dr. Sidney Martin's results and my own almost exactly correspond, whereas the proportion in Heitler's series is much smaller. I am disposed to attribute this to the fact that amongst the bodies examined at the Middlesex Hospital there is a far larger proportion of cases of cancer, owing to the existence of a special cancer department there wherein the patients, in the language of the Founder, "remain until relieved by art or released by death." I have shown that evidence of the arrest of a previous tuberculosis is more common when death occurs from cancer than when it occurs from any other disease. Other observers have found evidence of arrested tuberculosis in a far larger percentage of cases than those above stated, 23 per cent., 38 per cent., and even 60 per cent. being recorded. It is difficult to account for this discrepancy and time does not permit me to discuss the question on this occasion.

PROCESS OF ARREST.

The exact process by which the arrest of the disease is effected is a matter of much moment to the patient, for upon it may depend his prospects of future health. Three chief varieties of obsolete lesions may be recognised. 1. Pigmented tubercles which have undergone fibrosis may be seen upon the margins of areas of fibroid induration around which there is much puckering and scarring and within which small caseous or caseo-calcareous nodules are often present. This is the most common form of arrested lesion and is fortunately the one which is least likely to be a source of subsequent re-infection, as although a few tubercle bacilli may be found in the centres of the small caseous nodules the organisms are probably no longer active. Dr. Sidney Martin was unable to reproduce the disease by inoculation with such material. Tubercle bacilli can rarely if ever be found on microscopical examination of sections through the fibroid structures which constitute the greater part of lesions of this kind. 2. A caseous mass of considerable size—e.g., of that of an olive or a small walnut—may become surrounded by a fibrous capsule. This is a condition fraught with great possibilities of danger. I have reported a case in which such a mass had probably been present for 40 years, but owing to the destruction of the capsule surrounding it the caseous contents were discharged into a bronchus and death from acute tuberculosis of the lungs occurred in 28 days. 3. Arrest may take place after the formation of a cavity. This, although certainly not so favourable a condition as that first described, is nevertheless not incompatible with long life. I described in 1892 the case of a woman who had a cavity at the apex of the left lung which was then of 47 years' standing. She is still alive and well.

I think that as a general rule when arrest takes place in the stage of cavity the patient ultimately dies from some pulmonary disease. The liability to the formation of an aneurysm of the pulmonary artery must also be remembered in forming a prognosis in such a case.

[3] Treatise on Mediate Auscultation (Translation), 1846, p. 293.
[4] Guy's Hospital Reports, Series I., vol. vi., p. 230.
[5] Brit. Med. Jour., Oct. 31st, 1891.
[6] Wiener Klinik, 1879, p. 269.

CONDITIONS INDUCING ARREST.

No attempt was made in the cases to which reference has just been made to determine the conditions which had led to the arrest of the disease; the observations were pathological only and it is unlikely that the medical histories would have repaid detailed examination. In the great majority there would certainly have been nothing to suggest the presence of a tuberculous lesion of the lungs. In my experience records, whether pathological or clinical, to be accepted as evidence on any particular point must be made with a definite relation to that point, and the medical history in these cases had not been taken with especial reference to the possible presence of an arrested tuberculous lesion in the lungs. It is probable that in most of the cases infection occurred at some period when the resisting power to disease had been temporarily lowered by unfavourable circumstances, and that this period had been followed by one of increased vitality which prevented further extension of the disease. All who have had the experience which is to be gained by a long attendance in the out-patient department of this hospital must have observed many cases in which the disease has ultimately undergone arrest, although perhaps there seemed at first little probability of such a termination. Arrest is not impossible even to the dweller in a London slum and it may be unattainable to one who has all that wealth can purchase.

Tuberculosis of the lungs is a disease the treatment of which has always excited to a marked degree the interest both of the medical profession and the public; this, however, has not always proved of unmixed advantage, as was amply demonstrated during the tuberculin craze in 1890. As I have ventured to remark elsewhere,[7] "the great interest excited throughout the world by Koch's announcement is still fresh in our memories, the lamentable lack of judgment, of self-control, and of those critical faculties which should characterise the members of a scientific profession displayed by many on that occasion may serve as a warning for the future." The medical profession and the public are now passing through a similar though less acute phase of excitement with regard to the "open-air" method of treatment and it may be useful to recall these words of warning ere extravagant hopes are formed of the results likely to be obtained. This I say not from any lack of confidence in the method, for on the contrary I hold that its value has been conclusively proved, but because I fear that, in some quarters at any rate, there are signs of a failure to appreciate the long period of treatment required, even after arrest has been obtained, to consolidate the lesions and to render them capable of withstanding the strain which the ordinary work of life entails.

ARREST, HOW PROCURED.

The past 25 years have witnessed the trial of many reputed remedies for "phthisis," nearly all of them lauded either as specifics or as having been observed to produce a marked effect upon the course of the disease. Approval of these methods of treatment has in many cases not been limited to their discoverers. I have sometimes thought that it would be an advantage if the publication of therapeutic conclusions were restricted to such members of the profession as had proved themselves to possess a capacity for accurate clinical observation. Had it been so we should certainly have been spared much that has been written with regard to the effect of these remedies upon the course of pulmonary tuberculosis. It is believed to be a matter of extreme difficulty to determine the value of remedies in the treatment of disease. If, however, we may judge from the short period in which, in some cases at any rate, it has been possible to come to a favourable conclusion—e.g., the use of salicin and its compounds in the treatment of acute rheumatism, of thyroid extract in myxœdema, and of the diphtheria antitoxin—it is permissible to doubt whether in general this is not due to the absence of any value in the remedy and not to the inherent difficulty in the observation.

As to the methods most likely to bring about arrest of the disease I have ever held but one opinion which I may quote from the work on "Arrested Pulmonary Tuberculosis," to which I have already referred[8]: "It is not to remedies which effect the elimination of tubercular deposits that we must look forward with hope in our battle with pulmonary tuberculosis, but rather *to such as increase the resisting power of the individual* and enable his tissues to stop the progress of the disease. This they are ever striving to do, even when the destructive process is most acute, and it is only necessary that the local or constitutional conditions should turn in their favour for them to commence the construction of the fibrous wall which will turn back the invader." This resisting power is to be augmented by all such measures as in the healthy tend to maintain health—viz., a quiet life spent chiefly in the open air, plenty of plain food, and exercise suitable to the condition of the individual. We have, indeed, in this country taken long to learn the value of a system of treatment based upon an attempt to develop by every means the resisting power of the body to disease.

Although it is now 45 years since Brehmer enunciated the principles of feeding, rest, graduated exercise, and fresh air, and described the results which he had obtained under his system at Görbersdorf, the "hygienic," "open-air," or "sanatorium" treatment of consumption made little way in this country, chiefly owing, I think, to the belief, which events have proved to be unfounded, that the ordinary English patient would not submit to the restrictions upon his liberty involved in a residence in a sanatorium. It is only lately that the knowledge of the success obtained by Dr. Otto Walther at Nordrach, in Baden, on lines which are a natural development of those laid down by Brehmer, has become general among physicians in this country. My own knowledge of this system and of the success by which in Dr. Walther's hands it is attended is not of yesterday, nor has it been derived from the perusal of magazine articles, but from observation of patients before and after they have undergone treatment there, and I have no hesitation in stating that in my opinion the results observed at Nordrach far surpass any hitherto obtained. It is quite unnecessary for me to describe to you the Nordrach system, as I have already done so at length elsewhere,[9] and much has since been written about it by others. I shall therefore assume that you are well acquainted with it. The method is being carried out at several recently-opened sanatoria in this country and so far with most encouraging success.

It is, or should be, obvious that the best method of treating any form of disease is that which affords the greatest amount of benefit to the largest number of sufferers; whether it will cure every case is not the question, although that is the standpoint from which the public, to whom it is now too much the fashion to appeal, is apt to view the matter. The uninformed who may be disposed thus to judge the open-air treatment of tuberculosis will probably find their new-born ardour somewhat damped when they discover, as they certainly will, that it is not possible thus to produce arrest in every case. Whether every patient in any early stage of the affection should be treated in a sanatorium (if it were possible to do so) is a question on which opinions may differ. I certainly consider that a residence, if only for a few months, in such an institution conducted on sound lines is of the greatest value in educating the patient how subsequently to live in a manner most likely to lead to the arrest of his disease, and I believe that such a result is more likely to be thus attained than if he immediately betakes himself to the best climate in the world and lives there without adequate medical supervision. It is infinitely more difficult to enforce the necessary restrictions upon a patient who is living as a free man in a hotel than upon the inmate of a sanatorium. Upon the question of climate I should not like to be misunderstood; we have certainly in the past been wont to rely too much upon the influence of climate and to attach too little importance to the necessity for a careful regulation of the details of the patient's life and a dietary abundant even to excess, but to rush to the opposite extreme and to state that "climate has nothing to do with the matter" and that a sanatorium may be placed "in the highlands of Scotland, the lowlands of England, or the bogs of Ireland" is evidence of a state of mind characteristic of the irresponsible enthusiast. No one, surely, will deny that the healthy are influenced by climate. Is it, then, only to the sick that it is a matter of no importance where they dwell? I am glad to know that in selecting a site for the sanatorium which we hope shortly to establish in connexion with the Brompton Hospital we shall not consider that climate is of no importance.

EXISTING CONSUMPTION HOSPITALS.

It may occur to some—indeed, it has already been so stated—that if the views here enunciated are sound the existing hospitals for the treatment of consumption and diseases of the chest situated in towns are no longer required

[7] Diseases of the Lungs, p. 397.
[8] Loc. cit., p. 71.
[9] Diseases of the Lungs (Fowler and Godlee), p. 393.

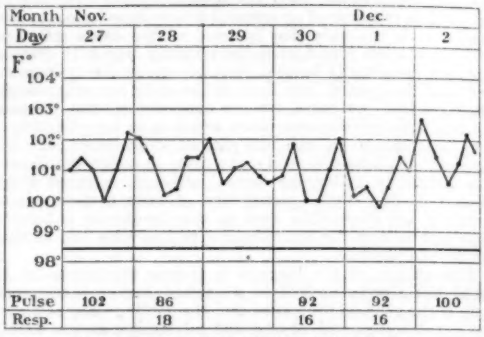
and that the sooner they are removed into the country the better. A little consideration will show that this is not so and that whatever changes the future may witness it will always be necessary for this hospital to maintain a very considerable number of beds and of course an out-patient department in London. In the first place, a very large number of the patients treated here and in similar institutions are not suffering from tuberculosis. Pleurisy, empyema, bronchitis and other affections of the trachea and larger bronchi, the various forms of disease of the heart and large vessels, mediastinal growths and other varieties of malignant and mycotic disease within the thorax are neither unimportant nor rare affections and sufferers from all of these diseases are constantly under our care. When this hospital has a sanatorium attached to it in the country it will still be desirable that patients should be under observation for a period before being sent there, as in no other way could the admission of unsuitable cases be prevented, our experience proving that in a very large number of cases the medical certificate entirely fails to disclose the real condition of the patient. The out-patient department of this and similar hospitals will be invaluable for the collection of cases suitable for the treatment in sanatoria, even should such institutions become as numerous as the most ardent supporters of the movement in their favour desire. We can also here commence the education of patients in the advantages of fresh air over the stuffy atmosphere of the rooms in which they too often live; we can show them the necessity for rest in bed when fever is present, a point on which it is most difficult to convince patients of the poorer class, and also for scrupulous care in the disposal of the expectoration. To these may be added the great advantage from a disciplinary point of view of a previous stay in hospital before admission to the comparative freedom of life in a sanatorium, a point the importance of which will be readily appreciated by those who have had experience in the management of similar institutions for hospital patients.

To show that it is possible even in the wards of a general hospital by rest and an abundant dietary to produce a very marked effect upon the course of tuberculous disease of the lungs of a very active type I have placed upon the screen the temperature charts of a case recently under my care in the Middlesex Hospital. They extend from the date of the patient's admission on Nov. 25th, 1898, to April 6th, 1899, when he left for the convalescent home at Clacton-on-Sea, and from April 28th, on his return, to May 6th. With the exception of one fortnight the temperature was taken every four hours and from Jan. 9th it was taken for a period of three minutes in the mouth and in the rectum simultaneously.

The patient was a man, aged 22 years. There was no family history of tuberculosis. Six weeks before admission, after rowing, he was suddenly seized with a rigor. For the fortnight following, although feeling ill, he went to his business as usual. On Oct. 28th he took to bed under medical advice. On Nov. 1st he had an attack of pleurisy on the left side. A week later he got up and was about for three days. He then had "influenza" and returned to bed with a high temperature and pains in the back, head, and legs. This lasted until Nov. 16th, when he was attacked with "pneumonia," the symptoms being cough and expectoration with some dyspnœa. He then had a slight hæmoptysis. Almost throughout the illness thus variously named he had been suffering from night sweats and had emaciated considerably. The patient's weight on Oct. 13th, immediately before the onset of his illness, was 9 st. 2 lb. The patient was a man of poor physique and the examination of the chest showed the presence of fine crackling râles in the left supra-spinous fossa and also at the apex of the lower lobe on that side. There was a pleural friction sound in the left axilla. The temperature was 103·2° F. and the pulse was 102. The sputa contained tubercle bacilli. On Dec. 8th the patient was placed on the following diet. At 5 A.M. half a pint of hot milk and half an ounce of rum. For breakfast tea and a pint of milk, three or four slices of bread-and-butter, and one egg. At 9 A.M. a pint of milk. For luncheon half a pint of soup or beef tea and a piece of bread. For dinner a chop, potatoes, and greens, milk-pudding, a pint of milk, and a piece of bread. For tea three or four slices of bread-and-butter and one egg. For supper half a pint of soup or beef tea and a piece of bread. At 8 P.M. a pint of milk.

The activity of the morbid process in this case is to some extent indicated by the fact that there was continuous pyrexia for 26 days, the temperature first touching 98⅘° on Dec. 22nd. For the first fortnight of his stay in hospital the temperature (taken in the mouth) ranged between 100° in the morning and 102° in the evening, during the second fortnight between 99° in the morning and 101° in the evening, and during the last week of December between 99⅘° and 98⅘°. From Jan. 9th up to March 1st, 1899, when the patient suffered from a typical attack of influenza, several cases

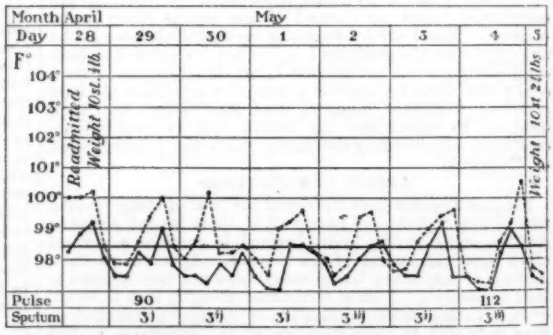
CHART 1.



Oral temperature during first week of treatment.

of which disease were in the ward at the time, the fever was of a mild remittent type with a gradual tendency to decline. After the attack of influenza, which was accompanied by high fever, the temperature resumed its previous type but with a rather wider range. The temperature for the first week and last week of treatment are here given (Charts 1 and 2). The physical signs indicated at first an extension

CHART 2.



Oral and rectal (dotted line) temperatures during last week of treatment.

of the lesions in the left upper and lower lobes, the crackling râles becoming more numerous and reaching for a greater distance along the interlobar septum. Subsequently, as the temperature fell they were less distinct, except after the attack of influenza. A few râles were still present at the time of the patient's final discharge. The cough was troublesome throughout. The expectoration varied in amount and there were about two drachms daily of thick, yellow, muco-purulent sputum, containing abundance of tubercle bacilli when the patient left the hospital. The following table shows the state of the body-weight at various periods; it is unfortunate that it was not taken on his admission.

	st.	lb.		st.	lb.
Oct. 13th	9	2	Feb. 16th	9	3
(Dec. 8th, extra full diet.)			Feb. 23rd	9	6
Dec. 29th	7	7½	(March 1st, attack of influenza.)		
Jan. 5th	7	10½	March 2nd	9	7
Jan. 12th	7	13	March 9th	9	7
Jan. 19th	8	3	March 16th	9	6½
Jan. 26th	8	6	March 23rd	9	8
Feb. 2nd	8	10½	April 28th	10	0½
Feb. 9th	9	0	May 5th	10	2½

CHART 3.

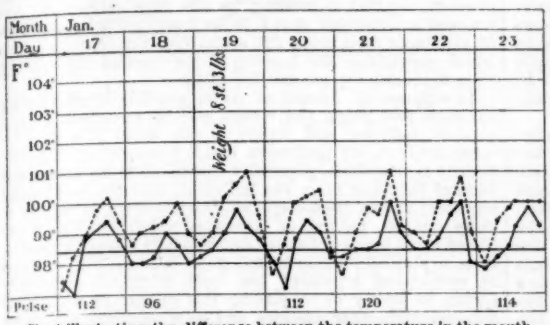


Chart illustrating the difference between the temperature in the mouth and that in the rectum (dotted line).

The failure to maintain the gradual increase in weight during the month of March was clearly due to the attack of influenza.

There are two points in this case to which I wish to direct attention. One is the remarkable gain in weight, probably from about 7 st. (certainly from 7 st. 7½ lb.) to 10 st. 2½ lb. This occurred notwithstanding the fact that the disease was not arrested, as is shown by the presence of cough and expectoration and the discovery of numerous tubercle bacilli in the expectoration when the patient left the hospital. This very considerable gain in weight I attribute to the large quantity of food which the patient took and assimilated. That a patient may gain in weight and yet the disease may not be arrested is no new observation, but with an ordinary hospital diet it is, in my experience, a rare event for a patient to gain 3 st. in weight without the disease undergoing arrest. What I observed in this case accords with my experience of others treated on similar lines (rest and hyper-alimentation), and I believe that *the larger the quantity of food administered the less is the significance to be attached to a gain in weight as evidence of the arrest of the disease.* I do not say that a gain in weight is not of importance. On the contrary, it is a fact of the greatest moment, for without it the progress of the disease is almost certain, but it is not by itself, even when remarkable in amount, a proof of arrest, when the quantity of food taken has been unusually large. I so frequently observe reference to the increase in weight in patients submitted to this method of treatment that I think it desirable to draw attention to the fact just stated.

The second point is the difference between the oral and the rectal temperatures (Chart 3). You are doubtless aware that at Nordrach the patients take their own temperatures in the rectum four times daily, and so far as I have been able to learn they do so without expressing any particular objection. The necessity for such a proceeding, which for obvious reasons does not appear at first sight to commend itself, has not hitherto been recognised in this country. The oral temperatures in the evening were from 0·5° to 1° or even 2° F. lower than the rectal. The oral temperatures in the morning were usually slightly above the rectal but sometimes one-fifth of a degree below. There was thus a far greater difference between the temperature in the mouth and that in the rectum at the higher than at the lower level.

The important question whether the patient is to remain at rest or to take exercise and the amount of exercise to be taken is to be decided by the presence or absence of pyrexia. It is therefore of great moment to know the real temperature of the body, not merely that of the mouth. Now it is clear that the difference between the temperature in the mouth and in the rectum may be as much as one degree or one and a half, or even two degrees. It has, I believe, been shown that in order to invariably obtain the true temperature in the mouth it is necessary to close the lips for 20 minutes before inserting the thermometer. If there were a constant difference between the oral and the rectal temperature it is obvious that it would only be necessary to know this and to take it into consideration in reading the temperature as taken in the mouth, but, as these charts prove, the difference is not constant but extremely variable. I am therefore led to the conclusion that the only trustworthy method of ascertaining the temperature of the body is to take it in the rectum.

Hospitals for consumption have in the past conferred incalculable benefits on sufferers from tuberculosis, but owing to the necessary limitation of the period of treatment it has not been possible here to set before ourselves as an objective in all suitable cases the complete arrest of the disease, and had we possessed a sign-board we should, I fear, have been compelled to imitate the humble craftsman and imprint upon it the words "Repairs neatly executed." Let us hope that in the future by greatly extending the period of treatment it may be possible in a much larger proportion of cases to secure such complete arrest. Herein, indeed, lies the difficulty in dealing with hospital patients, especially such as have families or relatives dependent upon them for support, as they cannot in most cases afford the time necessary to secure permanence of the reparative changes taking place in the lungs. How long a period of complete rest is generally necessary to effect this must have been appreciated by all who have had an extended experience in the treatment of such cases.

Clarges-street, Mayfair, W.

THE PREVENTION OF SYPHILIS.[1]

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IN entering upon the question of the prevention of syphilis there are two features which require full recognition, as upon them this problem rests, one etiological and pathological, physical—the cause, its multiplication in the frame, and mode of transfer from individual to individual; the other socio-moral, ethical—that phase of our civilisation, promiscuous intercourse, by which the cause is mainly spread in the community. It is the relationship of the latter to the former as determining the outcome—prevalence of disease—which compels us to consider the question as a whole and not merely from a hygienic standpoint when deciding on the action to be taken under our present civilisation and polity.

The cause, which everywhere (and the same pertains in time from the earliest recognition of the disease) demonstrates the presence of syphilis through similar manifestations is, we infer, an organic entity—a micro-organism—not yet identified. While capable of transfer to certain animals (though this is denied by some) it is practically a human malady which is communicated through contact (acquired) or through parentage (inherited). As a rule it enters the body by surface inoculation, and in a lesser ratio by the blood or semen. In the first case it sets up active changes at the site and in the contiguous lymph glands suggestive of attempted preclusion and localisation of the virus, yet followed for the major part by a true systemic infection; in the second case it is directly transmitted to the system of the individual or embryo through these media. During the primary and secondary periods the virus is capable of being inoculated, and during the latter period it is capable of being transferred with the blood or semen, but how far beyond the period of active changes it can be transferred to the embryo seems an undetermined point.

Like disease in general the origin of this special malady is obscure. Whether it is primarily a pathogenic germ apart from the human frame, or is primarily innocent yet pathogenically evolved under a favourable human environment, or is derived from normal elements adversely modified; whether, again, it arose in one or several sections of the human race; or whether it is capable of a spontaneous recrudescence in the future if conditions permit—these are not merely points of academic interest but they have an important bearing on the eradication of the cause. For present practical purposes we know of it only as arising from pre-existent disease and as transferred throughout the world at large in the selfsame methods, and while

[1] A paper read before the British Medical Association, August 3rd, 1899.

apparently no special marriage bonds such as monogamy, polygamy, or polyandry, have been connected directly with its presence or diffusion, unrestricted sexual intercourse, promiscuous as to time and person, has everywhere characterised its prevalence. In the local conditions produced by prostitution an environment has been generated favourable to the multiplication and envenoming of the virus and by means of this agency the virus has become extensively dispersed throughout humanity.

With these features clearly borne in mind it is apparent that we can approach the problem of prevention in two ways—through hygiene, having for its object the preclusion of lineal descent of the virus, or through ethics directed towards the extirpation of the great diffusing medium. While both agencies operate towards the suppression of the disease the ethical procedure makes, in addition, for the suppression of the vice. For complete results the first necessitates an abnegation of the liberty of the subject and a strict compliance with stringent sanitary rules, and the second a moral millennium in which the ascendancy of the higher faculties of our composite nature over the animal instinct and physiological impulses shall have been brought about or the brotherhood of humanity be the dominant factor of conduct. It may be said that both these standpoints may be dismissed from the sphere of present discussion on the ground that they are incapable of being fully realised under the conditions which obtain, yet it is no less apparent that they contain the principles on which we must proceed to obtain the present attainable, even though that level be far below what is possible or desirable.

But when this question of prevention comes up for inquiry and solution there is one aspect of the subject which requires prior consideration, bearing as it does on the necessity or desirability of action. I refer to the statement which has been made by some that the natural course of this disease is to retrogress, apparently from an acquired immunity of the race through exhaustion of the necessary nidus by existent and anterior widespread disease. This view is brought forward in the "Encyclopædia Britannica."[2] After stating that "syphilis in the United Kingdom at the present moment is in the stage of an epidemic in its decline," the writer goes on to say: "A time must come when the soil is practically worn out, when it becomes so poor that the organism grows only in a stunted form producing a mild disease, till in time it ceases to grow altogether;" yet adding the cold comfort that: "After lying fallow for a time the soil may recover its power and the disease be renewed in a more virulent form." As opposed to the first statement we have the *British Medical Journal*[3] noting that "those best acquainted with it state that venereal disease is on the increase among the civil population of this country"—an opinion which probably many of those in hospital practice in the metropolis and in the larger towns will support. And in respect to this theory of retrogression, while it seems tenable on the hypothesis that the disease is universally present and that the acquired immunity is indefinitely transmitted, yet this necessary basis is wanting, and, moreover, fresh soil is in production with each succeeding generation to furnish the necessary nidus for the growth and the maintenance of the vigour of the virus. If the natural history of the disease is to self-effacement the nations of the Old World, such as China and India, should by their present state illustrate it or at least closely approximate thereto, but the available data culled from native sources and the returns from troops located in these countries are far from supporting such a view; here frequency and intensity of disease are features certainly not absent. A decline, partial in extent, may be perceptible in this country due to increased knowledge, to personal hygiene, and to improved therapeutics, and possibly not unconnected with sanitary regulations now non-existent, yet these are not innate and constant, but are acquired and fluctuating factors, and I submit that this theory of natural emancipation from this disease is a fragile reed to rest upon. That, like other infectious diseases, it has its ebb and flow, seen in statistical undulations, is a feature deducible from its cause and falling under the one same explanatory theory.

Nor does it seem possible to ignore the hygienic side of the question and to rely upon the extirpation of prostitution through moral and social agencies. Nor does it seem desirable to rest satisfied with hygienic means and so leave prostitution, the main diffusing agency, free to renew the never-ending task of meeting its dire physical results. Yet we need to remember that it is the comparative hopelessness of assistance from moral and social forces in the near future which constitutes the cogency of the demand for sanitary rules to meet the grave existing facts.

To suppress all disease as far as possible by eliminating the cause and curing the results and so to reduce the sum total of suffering and misery in this world is a duty inseparable from our profession, and it is self-evident that this malady is one which, physically viewed, from its extent and baneful influence upon the individual and the race beyond any other known disease specially claims from us the use of every weapon, natural or otherwise, which Providence has placed in our heads or hands. And ethically viewed, appealing to us as philanthropic men and good citizens, I submit that no socio-moral argument has been advanced sufficiently cogent to justify us in placing this disease in a different category from other diseases and so withholding any power which we possess for its suppression or cure.

Hence, then, this disease being amenable to hygienic principles and claiming from us all possible alleviation what data have we to guide us as to what is practically attainable? We have the principle recognised in this country in other dangerous infectious diseases that not merely actual transfer but acts conducive thereto are rightful grounds for State interference by law, and to go no further than ourselves we have also evidence accruing during the last 35 years to the effect that through surveillance of prostitution and segregation of the affected we can diminish the amount of this special disease and attenuate its virulence. I base these deductions on the conclusions arrived at by official committees, on the statements of public officials, on the comparison of military stations under sanitary rules and those not under sanitary rules during the same period and of districts at different periods when these opposite conditions existed, and on the outcome from limited communities under favourable circumstances for testing purposes. (*a*) In respect to reduction of prevalence the Home Committees of 1868,[4] 1869,[5] 1870,[6] 1879,[7] and 1882,[8] leave no doubt; and the statements of the Government of India on the results following the Cantonment Rules of 1868[9]; of the Calcutta Committee of 1881[10]; the Fort St. George (Madras) returns following the Act and the recrudescence of disease in 1877 on its suppression[11]; the evidence of the Surgeon-General in Bombay in reply to the

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[2] "Surgery—Venereal Diseases," Encyclopædia Britannica (ninth edition).

[3] Brit. Med. Jour., April 22nd, 1899.

[4] "In places where the Act is in operation not only is the amount of disease less but the cases exhibit a milder character ..... the physical evils have abated." (Report of the House of Lords Committee, 1868.)

[5] In view of the "decrease of disease" and other recognised good results of the 1866 Act an extension of it was recommended. (Report of the House of Commons Committee, 1869.)

[6] "Acts have reduced the worst forms of the disease and directly and indirectly promoted the objects sought for." "Primary syphilis had been reduced from 120 per 1000 in 1865 to 54 in 1870, while no such lessening had taken place in the unprotected stations which varied from 99 to 113." (Report of the Royal Commission on the motion for the repeal of the Contagious Diseases Acts.)

[7] "In stations not under the Act the proportion was 20 against five in those under the Act." "In the first years of the Act the admissions from primary syphilis in certain registered stations were 91 per 1000, reduced to 35 in 1877 and 40 in 1878." Cases of diseases among the prostitutes examined amounted in 1865 to 76·24 per cent. and in 1879 to 7·40 per cent. (Report of the House of Commons Committee, 1879.)

[8] The House of Commons Committee re-appointed in 1880 reported in 1882: "Has successfully served" for "the diminution of venereal disease." "The actual statistics show that the reduction in secondary syphilis due to the Contagious Diseases Acts has been 39 per cent." "The extent to which the Acts have diminished syphilis in the subjected districts appears of itself to establish the hygienic utility."

[9] "The introduction of rules into cantonments was followed by a marked decrease in the prevalence of venereal disease among the troops and the decrease continued to manifest itself with more or less fluctuation until about 10 years ago (i.e., 1887) when an increase became observable." "Increase has been materially checked by the operation of the rules in question and by the establishment of lock hospitals." Sir A. D. Home gives the average of five years preceding the operation of the Contagious Diseases Act in Bengal as 314 per 1000 and from 1877 to 1881 as 241 per 1000. (House of Commons Return, East India (Contagious Diseases), 1888.)

[10] In the Calcutta garrison primary syphilis was reduced from 10 per cent. to 1·7 per cent., in women from 25·6 per cent. to 3 per cent., and secondary syphilis "had ceased to exist." When the rules were withdrawn the garrison ratio advanced to 30·24 per cent. In the police force the same features pertained. The Surgeon-General remarks: "It is impossible that any sanitary improvement could have been brought to more absolute demonstration than the vast decrease of syphilis in Calcutta and its practical disappearance from the garrison." (Ibid.)

[11] "Its introduction was followed by a great diminution in the ratios of admission from constitutional syphilis." In 1863-68, prior to the Act, the average ratio from primary syphilis was 129·72 per 1000; from 1869 to 1876, during the Act, it was 58·84 per 1000; from 1877 to 1886, on its withdrawal, it was 146·03 per 1000. (Ibid.: Minute of Commander-in-Chief, Madras.)

Madras Committee of 1884[12]; the information furnished to the Venereal Committee of 1864 by Sir Henry Storks from the Ionian Isles and Malta[13] and by Mr. Inglott, the Controller of Charities in Malta[14]; the official reports to the Colonial Secretary by the Governor of Malta in 1887, including the military and naval experience,[15] and those by the Administrator of Hong-Kong[16] and the Administrator of Singapore and Penang;[17] the results of closure of 10 lock hospitals in India in 1885[18]; the 16 years contrast between protected and unprotected stations in this country[19]; the statements made by the *British Medical Journal* in the early years of the Acts,[20] and the latest returns from India compared with periods under protection,[21] surely furnish safe grounds for the conclusion, despite the apparent tendencies of some statistics to an opposite inference, that diminution of syphilis in frequency has been the outcome of the sanitary regulations known as the Contagious Diseases Acts. Indeed, as syphilis results in at least 90 out of every 100 cases from impure sexual intercourse and as the Acts undoubtedly prevented many diseased prostitutes from acting as foci of dispersion, how could the results be otherwise than as attested by the above sources of evidence? (*b*) In respect to virus attenuation, the statements made by Mr. J. R. Lane from lock hospital experience,[22] corroborated by Dr. Payne's experience as supplied to the Calcutta Committee of 1882[23]; the contents of Mr. Lane's letter to the *British Medical Journal*[24]; the summaries of the *British Medical Journal* in 1868[25]; the statement of Mr. Inglott on Malta[26]; that of the House of Lords Committee in 1868,[27] and that of the Calcutta Committee in 1881[28]; the opinions of the Madras, Bombay, and Calcutta medical officers referred to by the Commander-in-Chief, Madras[29]; the figures on duration in hospital and invaliding brought forward in the Indian Viceregal Council, 1897, by the Commander-in-Chief[30]; the memorandum of the Army Sanitary Commission, March 9th, 1897; the Indian Lock Hospital experience,[31] that of Hong-Kong,[32] that of Japan as stated by D. I. G. Fisher, R.N.,[33] and of Singapore and Penang as stated by the Colonial Surgeon[34]; and the increased deaths and invaliding in India in later years[35]; all these concur in the inference that the intensity also of syphilis has been markedly reduced by hygienic means. That by early recognition of the disease, by segregation of the sufferer from all irritating influences, and by local personal hygiene and therapeutics we form an environment curtailing the growth and evolution of the virus, is, I submit, reasonable, and that the practical data support this view is,

[12] Not only have admissions from gonorrhœa and primary syphilis among the British troops been reduced, but the type of the disease has been modified and the constitutional affections have almost disappeared. (Ibid.)

[13] "The disease may be said to have almost disappeared in the islands of Corfu, Zante, and Cephalonia." And in Malta, "in 1864, on April 12th out of a force of 6192 only five were under treatment; on Oct. 21st there were only eight cases in the whole garrison." (Report of Venereal Committee of 1864.)

[14] After noting that "the evils arising therefrom have never made their appearance in those terrible forms which are common in many other parts of Europe," Mr. Inglott refers to the year 1859 when in sequence to temporary abeyance of the Contagious Diseases Act "the awful consequences of non-restraint soon became apparent and an ordinance was re-enacted in 1861" which "had the effect of checking public prostitution to a great extent, besides of almost annihilating the disease." "Were it not for the inoculation from imported affections by foreigners and others the disease would long since have been extinct." (Ibid.)

[15] Sir T. Simmonds wrote: "There can be no doubt that in Malta ..... the result of the administration of the existing law has been hygienically most successful." The Principal Medical Officer, Army Medical Staff, wrote: "The Acts have attained their object by preventing the spread of the disease and by mitigating its type. In 1884 the Royal Munster Fusiliers, 374 strong, gave no admission from syphilis; the Duke of Connaught's Light Infantry, 900 strong, which on arrival from England landed 23 cases of venereal disease had on Nov. 15th, 1886, only one case of gonorrhœa in hospital; the 'Black Watch,' 740 strong, which arrived from Egypt with 38 cases have at present none in hospital." The Principal Medical Officer, Royal Navy, wrote: "Venereal disease not only few in number but very slight in character." (House of Commons Return, Sept. 10th, 1887.)

[16] The laws have had most beneficial effect ..... in preventing the development and communication of a very virulent form of venereal disease for which the colony in former years had an unenviable notoriety. ..... Cases of syphilis now few in number" (Ibid.). The Senior Naval Medical Officer, writing in 1870, says: "Judging from my own experience I should say that syphilis has all but disappeared from the colony." Compare these comments with the Army Returns for 1896, which give 65·3 per 1000 admissions for primary syphilis and 106·1 for the secondary form.

[17] "Disease has been largely checked." The Colonial Surgeon states: "The ravages, local and constitutional, formerly made by syphilis can only be thoroughly known and the beneficial effect of the ordinance fully appreciated by anyone who has held a similar position as I have done in Singapore and Penang before and since it came into force some 14 years ago." (Ibid.)

[18] From primary syphilis the advance was:—Bengal from 76·9 to 141·6 per 1000; Madras from 65·1 to 109·9 per 1000; and Bombay from 132·2 to 168 per 1000. From the statement of the Commander-in-Chief in the two Madras stations secondary disease increased in one from four to 40 and in the other from 22 to 34. The Government of India Proceedings record "a decided and progressive increase. The percentage compares most unfavourably with the percentage at the stations where these institutions were maintained." (House of Commons Return, 1888).

[19] The primary form was reduced from 130 to 50 per 1000 and returned to 138 per 1000 when protection was withdrawn, while the unprotected ratio from an initial 116 rose to 118 per 1000 and after abolition to 160 per 1000. In the words of Dr. Parkes: "In eight years the State was saved nearly 10,000 cases of syphilis." In secondary disease the protected ratio was 22·5 against 36 per 1000 in the unprotected, and five years afterwards the former reverted to 34 per 1000.

[20] For example in 1870: "Thus it is shown beyond all dispute that both for men and women the amount of syphilis is diminished by one-half where the Acts are in operation."

[21] The Commander-in-Chief at the Viceregal Council, India, 1897, gave the increase as 137 per cent. in primary disease and 188 in secondary disease from 1887 to 1895; and secondary disease in 1895 as four times more prevalent than in 1873. In 1880 the primary ratio was 87·9 per 1000 and the secondary ratio was 25·0 per 1000. In 1896 the ratios were 159·3 and 97·7 per 1000 respectively, while the ratio for all venereal diseases was 249·7 against 444·4 per 1000.

[22] Syphilis characterised 80 per cent. of ordinary women, 41·5 per cent. of the Government women; the average duration in hospital was in ordinary cases against Government cases: primary syphilis, 49 against 37; secondary syphilis, 56 against 37; tertiary syphilis, 52 against 55. Mr. Lane remarks: "Of the protected cases the primary sores were milder in character, secondary sores more severe among the ordinary women; early treatment had a most beneficial influence on the character and duration of the diseases." (Brit. Med. Jour., Feb. 15th, 1868.)

[23] "Among the registered women there has been a very marked change in the type of the diseases; in fact, the worst forms have practically disappeared." "In Calcutta the improvement among the European soldiers has in this respect been equally marked." (House of Commons Return, East India, May 14th, 1888.)

[24] "It is indeed a most remarkable fact that this legislation has not only greatly diminished the quantity of the disease, but has also had a very marked beneficial influence upon its quality, in its secondary no less than its primary stage. ..... They appear to have imbibed so small a dose of the poison or have imbibed it in so unconcentrated a form that they may be safely left to get rid of it by their own unaided powers." (Brit. Med. Jour., Dec. 12th, 1874.)

[25] Brit. Med. Jour., Nov. 7th, 1868.

[26] "Syphilitic affections being thus timely discovered and forcibly placed under medical treatment are generally primitive in their character and consequently easily overcome. Cases of consecutive syphilis are comparatively rare and none present those horrid forms so common where the disease is under no surveillance." (Report of the Venereal Committee of 1864.)

[27] Vide Note 3.

[28] "The Act has tended to diminish the extent of venereal disease and has so modified the type that the worst forms are now almost exceptional." As to its influence on the general population, there was "An important diminution in the extent of primary syphilis and the type was milder than in previous years." In 1884 following the suppression of the Act "The men (police) have suffered from the most malignant types of the disease, a thing unknown in previous years," and "30 per cent. of the garrison were invalided with syphilis." (House of Commons Return, East Indies, May 14th, 1888.)

[29] "It is worthy of note that the medical officers in Calcutta, Madras, and Bombay bear testimony to the favourable change in the type of disease effected by the operation of the Act." "Type of such disease as does exist (in Madras) is much less severe that that which formerly existed." (Ibid.)

[30] "Average stay in hospital for secondary syphilis, in 1887, 26 days; in 1895, 31½; invaliding augmented fourfold." Lord Roberts in the House of Lords stated that the invaliding two years before relaxation amounted to 126 and in 1894–95 it had increased to 648.

[31] That of Bengal and Madras is not noted, but in Bombay "in all three stations not only did venereal disease greatly increase but the type of the disease was more virulent than in the stations where the hospitals were kept up." (House of Commons Return, East Indies, May 14th, 1888.)

[32] "Of a type very amenable to treatment, formerly the type of the disease was of the most virulent character." The Senior Naval Medical Officer in 1875 wrote: "In 1849–50–51 I was surgeon of H.M.S. *Reynard* ..... have a vivid recollection of the sufferings of the crew from syphilitic disease in Hong-Kong; ..... a large proportion became affected, ... hard chancres and large phagedenic sores, ... secondary symptoms were also of frequent occurrence often requiring invaliding." "The altered state of things is very striking. During the year and three-quarters in which I have had charge of this hospital I have not seen a case of regular Hunterian chancre contracted at Hong-Kong and only a few sores which healed readily." (House of Commons Return, 1887.)

[33] "The lock hospital system combined with careful examination of all women belonging to the licensed brothels has simply stamped out the old virulent forms which has for years been associated with the name of Japan." (Ibid.)

[34] Speaking of the result of temporary closure of the lock hospital the Colonial Surgeon stated that in October, 1882, the percentage of diseased women was 11·34, and that in September, 1883, on re-examination, it was 44 (53 syphilis and 15 gonorrhœa). "Moreover, the type of syphilis and the ravages it had committed was such as required lengthened treatment in hospital and such as was seen only when the Act was introduced."

[35] In 1880 secondary syphilis gave ratios per 1000 of strength, deaths 0·06, invaliding 1·62, and in 1896 0·23 and 6·36 respectively. The primary ratio in 1896 was not quite double that of 1880, while the secondary ratio was nearly four times that of 1880 with about the same augmentation for deaths and invaliding. In 1896 it was noted that "the syphilitic cases were of a most virulent type."

to my mind, unquestionable. Indeed, the conclusions drawn on both these points from general sources are in accord with my own personal experience derived from an army practice of over 30 years.

Time does not permit the quotation of all those references mentioned and I limit myself to two, both from public sources, one bearing on the early years and one on the late years of the period of experience, one referring to home and the other to Indian results. The *British Medical Journal*[36] stated that "the evidence from all quarters is remarkable that both as regards the men and women not only has the quantity of the disease been diminished but its quality has been modified for the better in the most marked manner. Not only has the proportion of syphilitic disease to the milder affections been much diminished, but the syphilis which has occurred has been of a mitigated character and secondary affections have been rare." The Army Sanitary Commission, reporting on March 9th, 1897, after referring to their former statements that the Acts had been a failure, go on to say: "We now have proof, however, that the measures heretofore adopted in India, imperfectly administered as they often were, nevertheless effected a sensible influence in checking increase in the number of British soldiers admitted into hospital from venereal disease and in mitigating the severity of the disease itself, ... preventing its assuming that virulent and destructive character which it has now attained."

But the good which is to be obtained from sanitary measures will be dependent on the degree of observance of certain essentials for complete success—(*a*) an application of them co-extensive with the disease in range, in class, in sex; and (*b*) a uniform and continuous enforcement. These features were but partially present in the old Acts.

However, this country and most of our dependencies at the present time are in the unfortunate condition of communities in which vice, solicitation, and disease have a free hand. We have no public restrictive measures, and our present home state, be its relative bearing to the original ante-Act state what it may, is beyond doubt bad enough, while the army returns are a conclusive index to many foreign stations. Noting, however, the relation of prostitution to disease and the many contributing elements—social, moral, municipal—I submit that the right future course to adopt in the prevention of syphilis lies not in any one isolated line of action but in bringing to bear concurrently on the disease and its diffusing agency all the powers which our present civilisation places at our disposal; and these are: (*a*) moral and religious advance—to strengthen the higher elements of our nature; (*b*) proper housing of the poorer classes—to render possible the growth of modesty and chastity, and rational healthy amusements for mind and body away from our crowded thoroughfares—to curtail the present fostering influences of precocity and animalism; (*c*) social action—to facilitate marriage for those not having "the gift of continence," to remove the possible resort to selling the body for prostitution as a means of livelihood, and to curtail the twin contributing vice—intemperance; (*d*) municipal action—to prevent solicitation in the streets and public gathering-places and so remove the present temptations to the youths of both sexes, to eliminate agencies and localities for the pursuit of vice, and to make in all ways prostitution difficult; and (*e*) hygienic rules—to necessitate from the votaries of prostitution proof (in the shape of a periodical certificate satisfactory to a magistrate) of physical purity as a guarantee that in their illegitimate practice they are not disseminators of disease as well as of vice, to make sufficient and proper hospital accommodation for those not in a position to obtain adequate private treatment, and to furnish the means for compulsory segregation when necessary.[37]

Yet in furtherance of these ends we have to remember that in this country we cannot go in advance of public opinion and that there is a limit to restrictive measures in the power of the people, and herein lies the important and pressing necessity of educating the public generally (possibly even some of our own profession) on this subject, so that reason and right action may prevail in the end; and this seems to me a primary essential towards any future measure for the prevention of venereal disease.

Lee, S.H.

[36] Brit. Med. Jour., Nov. 7th, 1888.

[37] This groundwork of action is based on the existence of prostitution and its object is to provide a safeguard against this openly tolerated practice being detrimental to public health as well as to public morals, the burden of proof being thrown on the pursuer of this permitted free trade in immorality.

TEN CASES OF VAGINAL HYSTERECTOMY.

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THE operation of vaginal extirpation of the uterus and appendages has been very extensively practised during the last few years and the results obtained have been very satisfactory. Originally introduced as a radical treatment for cancer, its scope has been extended to other diseased conditions, such as uterine fibroids if below a certain size, chronic inflammation of the uterus with advanced bilateral disease of the appendages, pelvic suppuration, and, lastly, as a remedy in intractable cases of prolapse. The improvements in technique have been followed by great reduction in mortality. The best results have been obtained in extirpation for fibroids and inflammatory conditions, some operators having published series of 40 and 60 cases without a death. In cancer the mortality has been somewhat higher, especially if the disease has advanced beyond the early stage. It has also been clearly shown that for malignant disease extirpation of the uterus can only rank as a palliative procedure since recurrence sooner or later is almost invariable. There can be little question, however, of the great relief and prolongation of life which is generally afforded by the operation. I have performed vaginal extirpation in 10 cases—in five cases for cancer of the uterus (the cervix, four; the body, one); in three cases for multiple fibroids; and in two cases for chronic inflammatory affections, combined in the latter with removal of the appendages. In this series of cases one death has occurred due to intestinal obstruction nine days after operation; all the other cases made rapid recovery. The notes of the cases are briefly as follows.

CASE 1. *Adeno-carcinoma of the body of the uterus.*—A woman, aged 51 years, was seen first in June, 1896, on account of uterine hæmorrhage which had commenced six months previously. She had had one child 25 years before and the menopause came on in her thirty-ninth year. Examination revealed a narrow senile vagina. The cervix was atrophic; the body of the uterus was bulky and retroflexed. No adhesions could be discovered. The sound passed three inches and the cavity felt large. The uterus was explored under anæsthesia and small hard masses of growth were removed. Microscopically the fragments showed typical adeno-carcinoma and immediate extirpation was advised. The patient would not, however, at first consent, but later—in October, 1896—she was admitted into a home and extirpation of the uterus was performed. The ovaries and tube were normal and they were not removed. The patient rapidly recovered and she left the home in three weeks. The uterus on section showed extensive growth infiltrating the muscular wall; the peritoneum was healthy. The patient remained quite free from recurrence for 12 months. She then began to feel intense pain in the back and down the left leg and examination revealed a recurrence of growth at the side of the pelvis. A little later she developed enlargement of the lumbar glands and ascites. She then commenced with symptoms of lung trouble, hæmoptysis, and cough, the result of extensive secondary growth. She gradually sank and died 18 months after operation.

CASE 2. *Carcinoma of the cervix.*—The patient, a woman, aged 53 years, was sent to me by my friend Dr. Chapman in March of last year. For two months she had noticed bleeding from the vagina and a month previously to the time when she was seen by me she had commenced to have pains over the right hip. The menopause occurred at 43 years of age. The vagina was senile and narrow, the cervix was hard, and a mass of growth could be felt in the canal and invaded the internal os. The fundus was small and the cervix moved freely. Per rectum, however, induration of the right sacro-uterine fold and broad ligament could be plainly made out. The appendages were small. On April 30th vaginal extirpation was performed in a nursing home. The patient rapidly recovered, returning to her house in 18 days. The uterus showed advanced glandular carcinoma commencing in the cervical canal and reaching as high as the internal os. The fundus was healthy. It is in this form that the growth frequently becomes very extensive

before causing symptoms, and in this instance, although operation was undertaken two months after the earliest hæmorrhage, lymphatic invasion of the base of the right broad ligament had already taken place. The patient remained quite well for six months, but recently she has felt recurrence of pain in the right side of the sacrum, and now a small mass of secondary growth can be felt in the glands at the brim of the pelvis.

CASE 3. *Carcinoma of the cervix.*—With my friend Dr. Godson I saw the patient, a woman, aged 59 years, in July, 1898. A month previously whilst exerting herself she had a profuse hæmorrhage. Up to that time she had felt perfectly well. The hæmorrhage became very slight after a few days. She had three children, the youngest of whom was 25 years of age, and the menopause had occurred when the patient was 51 years of age. She looked in excellent health. The vagina was very narrow and the cervix showed an area of ulceration around the external os and felt nodular and hard. The uterus was small and moveable. Per rectum, however, slight thickening of the base of the left broad ligament could be detected. A few days later I removed the uterus at the patient's own home and she made a rapid recovery and at the present time remains in perfect health. The specimen on microscopic section showed adeno-carcinoma commencing in the glands of the cervix and being more advanced in the upper parts of the cervical canal. The body was small and atrophied.

CASE 4. *Carcinoma of the cervix.*—A woman, aged 40 years, consulted my friend Dr. Cooper in August of last year on account of uterine hæmorrhage which had been present more or less constantly for 10 months, and for the last month she had suffered from very severe pains over the right side of the sacrum and hip and shooting down the right leg. She had six children, the youngest being 10 years of age. Menstruation had been regular, but at each period the bleeding had been excessive. The cervix was much enlarged by a mass of growth involving both lips and extending posteriorly on to the vaginal roof. The base of the right broad ligament was thickened and the right sacro-uterine fold could be plainly felt. The uterus did not pull down well with the volsella. The body was moveable. It was evident that the growth had extended so much that although removal was possible recurrence must take place before long. The patient, however, suffered intense pain, requiring morphia, but she was otherwise in such good general health that I thought removal would give temporary relief although operation could not be urged. She decided to have the operation carried out. On Sept. 18th, assisted by Dr. Cooper, I removed the uterus. This was somewhat difficult on account of its large size and perimetric thickening on the right side. After taking away the uterus I found a mass of growth lying on the sacral plexus. This I removed completely, exposing the trunks of the nerves. The patient made a speedy recovery, all pain having ceased. At the present time, six months after the operation, she is very well, although occasionally she feels slight pains in the right hip. The relief given by removal has even in this advanced case been very remarkable.

CASE 5. *Carcinoma of the cervix.*—The patient, a woman, aged 38 years, had, when seen by me, been ailing for three months with attacks of vomiting and general weakness. She had had four children. She stated that she was fairly well until May, 1898. She then noticed an offensive discharge and hæmorrhage and for a month the bleeding had been very profuse. The patient was anæmic and had lost two stones in weight in two months. Examination showed an extensive epitheliomatous growth of the cervix which bled very freely. The uterus was not obviously enlarged and there was no perimetric thickening. Careful examination of the other organs of the body revealed no evidence of organic disease. Vaginal extirpation was performed in the usual way on August 5th. There was little shock and for two days the patient progressed favourably. She then commenced to be sick and this continued for four days. The temperature remained normal and the bowels acted freely. On the sixth day the sickness became fæcal and no flatus was passed. The pulse now rose to 120. It was evident that intestinal obstruction had supervened, possibly from adhesion of bowel to the stump of the broad ligament. The abdomen was opened. I found that the end of the broad ligament beyond the upper ligature on the right side was necrotic and a coil of ileum was adhering to it. This was separated, but no relief was given, and the patient died on the ninth day after removal of the uterus. No post-mortem examination was obtained. In this case I cut the upper ligatures short and drained as described below with gauze. Owing probably to the debilitated condition of the patient the usual adhesions occluding the peritoneal cavity did not form and I believe that the upper end of the broad ligament then became secondarily infected from the vagina. It is in these cases wiser to leave all the ligatures long and to draw the stump of the broad ligaments well down into the vagina.

CASE 6. *Multiple fibroids; hypertrophy of the cervix; prolapsus.*—The patient, a single woman, aged 45 years, was sent to me by Dr. Moss in February, 1897. She had suffered severely from sacralgia for six years and for some months she had been unable to go about. The pain was not relieved by rest. She complained also of a swelling in the vagina. Menstruation had been profuse for the preceding two years, lasting seven days. On examination the cervix was found to lie outside the vulva, due to great hypertrophy of the vaginal portion. The uterus was very bulky and a firm, rounded mass filled up the pelvis, reaching to the promontory of the sacrum. The sound passed forward four and a half inches and a mass was also felt in front of the uterus. The diagnosis of multiple fibroids was made. Some months later as she became quite incapacitated I advised total removal of the uterus. The patient was admitted to a nursing home in February, 1897, and a few days later the uterus was completely removed per vaginam. The operation was tedious owing to the bulk of the tumours which formed a mass of the size of a fœtal head. The appendages were healthy and were not removed. Since that time the patient has been well and able to carry on a business. The uterus showed great hypertrophy of the vaginal portion of the cervix which measured two and a half inches in length. A large fibroid occupied the posterior wall and similar smaller tumours were present on the anterior wall and over the fundus uteri.

CASE 7. *Multiple fibroids; cystic ovary.*—The patient, aged 38 years, unmarried, had suffered from constant pelvic pain for 10 years. This was felt chiefly in the back and in the iliac regions and was much aggravated during the menstrual periods. Menstruation (of the 28-day type and lasting from three to four days) began when the patient was 16 years of age. Pain was not a marked feature during the early years, but it had gradually become worse. She was quite unable to make any active exertion and was confined to a couch. No history of infection could be obtained, but she had been under treatment for many years without receiving any marked relief. The vagina was small, the cervix was high up, and the uterus was anteflexed. The fundus was pushed to the right side by a firm, irregular mass in the left broad ligament. The right ovary was enlarged, prolapsed, and adherent. There were also numerous peritoneal adhesions. As all previous measures had failed I advised total extirpation of the uterus. This was performed in December, 1897. The mass felt on the left side was an intra-ligamentous fibroid of the size of a large orange. The right ovary showed chronic inflammation and it was cystic; it was therefore removed. Along with the tube the left ovary and tube were small and apparently healthy. I therefore, with a view of avoiding nervous sequelæ, did not remove them. Convalescence was rapid and uninterrupted. The patient left the home at the end of three weeks feeling quite well. Since then she has at times complained of backache and right iliac pain, much worse on walking, although nothing abnormal could be felt, and there is no local tenderness. There was, I believe, in this case a nervous element and it illustrates the fact that even after a radical operation pelvic pain may persist in women of a neurotic type.

CASE 8. *Uterine fibroids; pregnancy terminated by abortion twice.*—A woman, aged 29 years, was sent to me by my friend, Dr. Carruthers. She had been married for seven years and had two living children, aged five years and four years respectively. Since 1896 she had been twice pregnant and on each occasion it had been necessary to induce abortion on account of a fibroid tumour in the left broad ligament. This rapidly enlarged during each gestation, causing intense pain and obstructing the lower segment of the uterus. In July, 1897, she was again three months pregnant when I saw her. She had been in bed for six weeks suffering from severe pain in the left side of the abdomen. On examination an irregular mass was felt reaching up to the umbilicus. The body of the uterus could be made out lying to the right and above the tumour. Per vaginam the fibroid mass filled up the left side of the pelvis, displacing the cervix to the right. It was evident that a living child could not be obtained *per vias naturales* and I did not feel justified in advising the patient to wait until full

term and then submit to Cæsarean section or Porro's operation. I therefore recommended removal of the uterus. The tumour and pregnant uterus were too bulky to permit of removal per vaginam, so I introduced a tent and the next day evacuated the contents of the uterus. A week later, as the tumour had much diminished in size, I was able to remove the uterus through the vagina. The broad ligaments were thick and vascular, requiring numerous ligatures. Dense peritoneal adhesions were found over the posterior wall of the uterus and over the tumour, thus accounting for the severe pain from which the patient suffered so much. The ovaries and tubes were normal and consequently were not removed. The patient made a rapid recovery and returned home in three weeks. Since that time she has been in excellent health. The tumour was an interstitial fibroid growing out into the left broad ligament and involving the whole side of the body of the uterus, the uterine cavity being displaced upwards and to the right. A fibroid tumour also occupied the fundus uteri and a similar tumour was present in the cervix. This case is of special interest since fibroids at the age of 29 years are very unusual.

CASE 9. *Chronic retroflexion and pelvic peritonitis; old pelvic abscess.*—A woman, aged 41 years, who had had three children, the last being born eight years previously, was sent to me in May, 1896. She complained of constant pelvic pain with severe dysmenorrhœa. The symptoms dated from her last confinement. She was then in bed for three months, her illness resulting in profuse discharge of pus from the bowel. This at the time gave great relief but she had been a chronic invalid ever since, unable to undertake any active exertion and suffering from repeated attacks of pelvic peritonitis. Examination revealed laceration of the perineum, chronic retroflexion of the uterus, with lacerations and erosions of the cervix. The fundus was firmly adherent in the floor of Douglas's space. To the right of the uterus was a dense mass of adhesions in which under anæsthesia an enlarged ovary and tube could be recognised adherent to the anterior wall of the rectum. Since palliative treatment by rest, tampons, &c., had been persevered in for years without obvious improvement I advised complete extirpation of the uterus and appendages. The patient was admitted into a nursing home in July, 1896, and vaginal extirpation of the uterus was performed. The adhesions in Douglas's space and the anterior wall of the rectum necessitated great care in separation to avoid injuring the bowel. After removal of the uterus the right appendages were enucleated and taken away. The left ovary and tube were small and as they did not cause pain I left them. The patient progressed very favourably and returned home in three weeks feeling quite well. Two months later she again complained of pain in the regions of the left appendages and I found that there was now an obvious left tubo-ovarian swelling. A few days later I opened up the scar and removed the left ovary and tube. There were no adhesions but a hydrosalpinx had developed in the tube and the ovary showed chronic atrophic inflammation. The patient went home a fortnight later and since then she has been very well although the artificial menopause induced some nervous disturbance and latterly she has suffered from chronic rheumatism.

CASE 10. *Chronic metritis and salpingo-oöphoritis pyosalpinx, right; pelvic peritonitis.*—The patient, a single woman, aged 24 years, was first seen by me in September, 1896. At that time she was suffering from a severe attack of pelvic peritonitis of gonorrhœal origin. She remained in bed for six months but at the end of that time there was little real improvement. Every attempt at getting up caused a fresh attack of inflammation. In February, 1897, I again saw the patient. Her general condition was excellent. Examination showed that the uterus was very bulky and tender and acutely anteflexed. The cervix showed abundant purulent discharge and erosions. At each side of the pelvis large adherent tubo-ovarian swellings were felt. On the right side a mass was firmly adherent in the floor of Douglas's pouch. In cases of this kind abdominal section has generally been performed, the appendages being removed and the uterus remaining *in situ*. The after results of these cases have, however, been often disappointing. The diseased uterus remains behind and pelvic pain with inflammatory thickening of the pedicles of the appendages is present. In this instance, as both appendages were extensively diseased, I decided that the safer operation and the one more likely to give a permanent cure was the removal of the uterus and the appendages per vaginam. On Feb. 18th I performed the operation in the usual way. On opening Douglas's pouch about six ounces of dark blood and clots escaped, evidently an old hæmatocele. After removing the uterus the right ovary and tube were enucleated from dense adhesions. The tube contained two ounces of pus; there was also an abscess in the ovary. The left appendages were similarly removed. On this side, however, the adhesions to the sigmoid flexure necessitated great care. The pelvis was now flushed out with sterilised water and the vaginal vault was sutured in the usual way. The patient had little shock and she made a rapid recovery. She is now in perfect health and in this instance there have been no nervous sequelæ attributable to the artificially induced menopause.

In all these cases the uterus was removed by the ligature method. The bladder having been widely separated the utero-vesical pouch is opened and then an opening is made in the pouch of Douglas. The broad ligaments are now ligatured in sections from below up. In passing the ligatures I have always used the notched needle, as recommended by Professor Sinclair. The ends of all the ligatures are left long. After removal of the uterus the condition of the appendages must be carefully investigated. If they are diseased it is easy to draw them down into the vagina and to form a pedicle which is tied close to the brim of the pelvis. In inflammatory cases great care is required in separating adhesions to the omentum and the bowel, but after the uterus is taken away these can be readily brought into view and dealt with. If the appendages are high up and a ligature cannot safely be passed a pair of pressure forceps will control the ovarian vessels at the outer border of the broad ligament and these may be removed in 24 hours. The cavity of the pelvis is now flushed out with saline solution and by traction on the ligatures the whole of the broad ligaments can be brought into view and any bleeding points secured. Sometimes, especially in cases of cancer, the cut surface of the vaginal wall bleeds freely and may require a ligature. The central portion of the gap in the vaginal roof together with the peritoneal edges is now united by continuous or interrupted silk sutures, any prolapse of bowel meanwhile being avoided by the introduction of a small sponge. In this way the raw area on the posterior wall of the bladder is covered over and a smooth peritoneal surface is presented towards the abdominal cavity, thus diminishing any tendency to prolapse or adhesion of the bowel or the omentum. A strip of sterilised moist gauze is now passed along the ligatures on each side to provide efficient drainage and the ends of the threads are cut off short just within the vagina. The vagina is now packed with gauze. This dressing may remain untouched for four or five days if all goes well. In cases of cancer, however, it usually becomes offensive and must be removed earlier. The vagina is then loosely packed with gauze. At the end of a week the gauze may be dispensed with and douches given gently and slowly may be used twice daily. The threads become loose and separate from the fourteenth to the twenty-first day. This, however, is often associated with slight pyrexia, beginning about the tenth day, and the discharge becomes offensive. This is due to infection of the stump of the broad ligament and the silk from the vagina. To avoid this drawback some during the operation cut off each ligature short after the ends are tied and then close the peritoneal cavity. The silk is then usually absorbed and causes no further trouble. In the one fatal case I cut off the ligatures short and the stump still became infected from the vagina, resulting in adhesion of a coil of ileum and obstruction. In cases of cancer where the tissue may be infected it is impossible to ensure complete asepsis, and I believe that it is best in these cases to leave the ends of the threads long and to draw the stump of the broad ligament well down into the vagina, passing a strip of gauze above it to provide efficient drainage. If healthy reaction occurs the peritoneal cavity is occluded within 36 hours and all danger of infection or adhesion of a coil of bowel is at an end. In removal for fibroids or chronic inflammation the ligatures may safely be cut short and then care should be taken to completely close the peritoneal cavity, leaving only a small opening at each side for the introduction of a gauze drain.

It appears to me that if the ligatures are cut short it is specially important to suture the vaginal vault, otherwise local infection of the stump of the broad ligament from the vagina is very likely to occur leading to troublesome convalescence and in some cases to peritonitis or obstruction of the bowels. It has not been shown, however, that there is any special disadvantage in leaving the ends of the threads

long, although local infection almost invariably occurs, and in cases where asepsis cannot be assured, as in cancer and pelvic suppuration, this should always be done.

Manchester.

UNILATERAL CASTRATION FOR PROSTATIC ENLARGEMENT IN A MAN AGED EIGHTY-SEVEN YEARS; ATROPHY OF THE PROSTATE.

BY H. W. WEBBER, M.D., M.S. LOND.,

AND

H. A. DUFFETT, F.R.C.S. ENG.

A MAN, aged 87 years, was seen on June 7th, 1895, for difficulty in micturition which he attributed to a chill caught two days previously. He had always been healthy; he had been a total abstainer for 20 years and was a non-smoker and a bachelor; he was the youngest of a family of six children, all the others of whom had lived to over 80 years of age. He was treated with a mixture containing bicarbonate of potash and tincture of hyoscyamus and an aperient dose of magnesium sulphate was ordered. On the next day as very little urine had been passed, the bladder was found to be distended, its fundus reaching nearly to the umbilicus, and the prostate was uniformly enlarged; the bowels had not acted. A No. 8 (English) gum-elastic catheter was passed with the help of a finger in the rectum and about two pints of normal urine were withdrawn. The catheter was passed daily with increasing difficulty up to June 13th, when neither a Jaques, nor a gum-elastic, nor a silver catheter could be lifted over the prostate. The distended bladder was accordingly tapped with a trocar and cannula above the pubes, and as none of the catheters at hand would pass through the trocar it was tied in till next day, when a No. 7 catheter was inserted and closed with a plug. This the patient pulled out in the evening and leakage of urine resulted. This took place every day, the bedclothes being constantly soaked with urine, and a large bed-sore consequently formed over the sacrum. It was still impossible to pass a catheter; the urine was now thick and ammoniacal. The patient's pulse was usually about 100 and his temperature was normal.

It was evident that unless something could be done to remove the prostatic obstruction the patient would soon succumb to cystitis and bedsores, and as his strength was fairly maintained it was decided on June 20th to remove one testis under local anæsthesia and if necessary and possible to remove the other later. The left testis, which was freely moveable, was pushed up to the external inguinal ring and fixed there. Seven minims of a 4 per cent. solution of cocaine were injected deeply and the skin was rendered anæsthetic with the ethyl chloride spray. The only trouble experienced in the removal of the testis was caused by its being lifted from its attachments to free the cord; traction on this caused faintness and much distress. The patient having been revived with brandy a ligature was passed beneath the cord by an eyed probe, the cord was frozen at the point of division with the ethyl chloride spray, the ligature was tightened, and the cord was then divided. The testis was then rapidly removed and the wound was sutured and dressed. The patient's condition at the close of the operation was good and as soon as the dressing was completed he fell asleep and remained so for over an hour. The cut surface of a median vertical section of the testis which was removed measured one and a half inches in length by one inch in breadth and a scraping showed under the microscope fairly numerous spermatozoa. On the 21st a soft catheter was passed with a little trouble into the bladder. The patient's condition was good and no leakage of urine into the dressings had taken place as he was kept constantly on the left side and the bladder was frequently emptied through the suprapubic tube. On the 22nd no catheter could be passed nor could any on the 23rd or 24th. The patient still caused much trouble by repeatedly pulling out the plug in the suprapubic tube and picking at the dressings; as a result the bedclothes were constantly soaked in urine and the wound was damaged. Up to the 28th no catheterisation was attempted, every effort being made to keep the urine from leaking from the tube, but on the 28th a No. 8 Jaques catheter passed easily. Rectal examination showed the prostate to be considerably reduced in size; what enlargement there was present was on the right side of the gland (and this was slight), the left lobe causing no projection at all. The suprapubic tube was removed. On the 30th the patient whilst sitting on the edge of the bed passed about a pint of urine, partly per urethram and partly through the suprapubic puncture. On July 3rd the patient's general condition continued satisfactory and the bedsores over the sacrum and trochanters were healing well. A soft catheter was passed (with no difficulty) daily and the bladder was washed out with a solution containing boric acid and glycerine. The bowels now acted once or twice every day. The suprapubic puncture had quite healed and also the operation wound. From the 8th the patient left his bed for an hour every day. There was very little cystitis. He attained his eighty-eighth birthday on July 6th. Rectal examination of the prostate showed the left lobe to be completely atrophied; the right lobe was hard in consistence and in size it appeared equal to that of a hazel-nut.

Remarks.—The points of interest seem to be: (1) the advanced age of the patient; (2) the value of local anæsthesia; and (3) the satisfactory results of removal of one testis for the cure of obstruction due to prostatic enlargement in this case. A definite conclusion can hardly be drawn from the result of one case, and a comparison with the list of cases of unilateral castration, monorchide, and testicular atrophy published by Mr. Hurry Fenwick is to be recommended.[1]

A CASE OF SEPTICÆMIA TREATED WITH ANTI-STREPTOCOCCIC SERUM.

BY OLIVER CALLEY MAURICE, M.R.C.S. ENG., L.R.C.P. LOND.

THE use of anti-streptococcic serum being as yet in its infancy any results, even those that are not perhaps the very best, obtained by its use may be instructive.

The patient in the present instance was a man, aged 75 years, a shepherd, who injured his hand while at work and for a little time had a small sore on the little finger and one on the back of the hand. About the beginning of May, 1899, he knocked the scab off the back of the hand and on the next day he found the hand and the arm to be swollen and painful. The axillary glands were also much swollen, painful, and tender. On May 5th I saw him in this condition and certainly gave him some relief by the use of antiseptics and fomentations, together with the internal administration of quinine and by scraping the sore. His temperature was 101° F., his pulse was rapid and feeble, and his general aspect was bad. The swelling of the glands disappeared, there was free discharge of thick pus from the sore, and the temperature was lowered. On the 15th he was worse; the glands were again enlarged and the hand was swollen and painful. I therefore made incisions into the hand, letting out some pus and serum. On June 1st he was removed to Savernake Hospital and on the 3rd an abscess of the glands in the axilla was opened. The temperature remained over 100° with variations until the 11th. The discharge from the axilla was profuse, the elbow and the rest of the forearm and arm became red and swollen, and the general condition was bad. The temperature was just above normal. An incision into the tissues about the elbow only resulted in a watery sanguineous discharge. On the 19th the temperature was 99·4°, the pulse was 68 per minute, there was profuse watery discharge from the axilla, and the patient's general aspect was bad. 10 cubic centimetres of anti-streptococcic serum were injected into the subcutaneous tissues over the abdomen. The temperature at 7 P.M. was 99·2°. On the 20th the temperature, the pulse, and the general condition were not much altered. On the 21st, the discharge being still profuse, 10 cubic centimetres of the serum were again injected at 2 P.M. There was a slight

[1] Brit. Med. Jour., March 9th, 1895, p. 529.

trace of albumin in the urine. The evening temperature rose to 100·8°. On the 22nd, at 12.15 P.M., as there was little alteration 10 cubic centimetres of the serum were again injected. The evening temperature rose to 102·4°. On the 23rd the discharge was much less and there was no albumin in the urine. The highest temperature for the day was 101·0° at 3 P.M. On the 24th the temperature was 101·2° at 7 P.M. By the 27th the temperature was normal and the patient was much improved in general appearance and on July 7th could go about. There was a very slight discharge of thin matter from the axilla and the swelling of the hand and arm was much less. There was no pain. Passive movements, massage, and regulated exercises were used to reduce the stiffness of the fingers and the little swelling that was left. The serum injected was supplied by the Jenner Institute of Preventive Medicine.

Marlborough.

SYPHILITIC DISEASE OF THE STOMACH.

BY J. W. DALGLIESH, M.D. DURH.

WHEN a patient complains of dyspepsia or of symptoms suggestive of ulceration or morbid growth of the stomach how seldom do we think of syphilis in making our diagnosis and how very rarely do mercury and iodide of potassium enter into our prescriptions. And yet if syphilis may cause catarrh of the bronchial mucous membrane why may it not cause gastric catarrh? In like manner we rarely think of gummatous disease of the stomach although it is known to be so frequent in many other organs of the body. On these grounds the following three cases are of interest from the rapidity with which gastric symptoms of the utmost gravity subsided under antisyphilitic treatment.

CASE 1.—On April 3rd, 1898, a married woman, 55 years of age, complained to me of pain in the epigastrium which seized her a few minutes after taking food and which made her afraid to eat. This condition had been gradually coming on since February, and she lost much flesh, strength, and colour. Dieting combined with bismuth and Dover's powder relieved her, but upon leaving off the treatment the symptoms returned. On June 11th at 2 A.M. she had profuse hæmatemesis, a large chamber pot being instantly three-fourths filled with blood; her face, hands, nightdress, and the bed linen were very much smeared, so sudden and profuse was the hæmorrhage which roused her from her slumbers. This seemed to confirm the opinion which I had been forming—viz., that she was suffering from malignant disease of the stomach. She lay in bed very still but quite sensible; she was fearfully exhausted, perfectly blanched, and very cold and was horribly emaciated and extremely sallow. Her pulse was frequent, regular, very small and short, and easily obliterated. The right rectus abdominalis was rigid and midway between the right costal cartilages and the umbilicus was a hardish swelling of about the size of a small hen's egg. During the next four days there were slight recurrences of the hæmatemesis and much altered blood and some pus were voided per rectum. The gastric pain disappeared with the bleeding and never recurred. The patient was often pulseless and several times she was thought to be dead. She was fed on iced Brand's essence of beef only and she took opium and turpentine. To my surprise she seemed to improve slightly and she expressed herself as feeling decidedly better, although she presented a ghastly sight. I had a vivid recollection of having treated her four years before for undoubted syphilitic ulceration of the skin over the left knee which rapidly healed under the internal administration of an iodide and dressing with mercurial ointment. In addition to numerous pigmented excavated scars over both hips, the result of multiple ulcerations which had healed rapidly under treatment by another medical man one year before, she also had numerous scars on both temples, caused by ulceration at a still earlier date, which had attacked first one side and then the other, and had also yielded readily to treatment. The question therefore presented itself: Was she now suffering from ulcerating gummatous disease of the pylorus? Acting on this hypothesis I immediately prescribed large doses of iodide of potassium which she took well and very soon she had more inclination for food. She rapidly improved, making flesh, strength, and blood in a truly miraculous manner, and after about 10 days of this treatment she was able to walk from one room to another. She has never had any gastric symptoms since and the swelling has entirely disappeared. There was a discharge of about half an ounce of pus and occasionally a little blood on the stools for about two weeks, after which it gradually disappeared and has not returned. About 10 days later she had a sharp attack of periostitis of the lower end of the right tibia. The iodide was still further increased and with rest the periostitis passed off, leaving the bone tender, thickened, and aching on exertion. On Sept. 4th, at 2 A.M., her husband found her in a severe and prolonged right-sided convulsion. On recovering consciousness she had motor aphasia. I now added mercury to the iodide. The motor aphasia rapidly passed off, but there was marked amnesic aphasia for over two weeks and then it gradually passed off. The pulse was still infrequent, regular, small, short, and of low tension. The aortic and mitral meso-systolic murmurs which had been present since the hæmorrhage were still to be heard, though growing fainter, and the apex beat could be felt a little to the left of the nipple line. On Dec. 27th the patient was found to be perfectly well and she expressed herself as feeling better than she had done for 10 years.

Some further points connected with the history of this patient may be of interest. She was married in England at 18 years of age and had had eight children, of whom five had died in infancy and three were alive and healthy; she had had no abortions. Some years ago she indulged to excess in alcohol, but subsequently had been an abstainer for some years. Her husband, aged 60 years, denied having ever had syphilis but admitted one gonorrhœa. For the last 10 years he had been a teetotaller but previously he had indulged to great excess in alcohol for many years. He had a very feeble heart, always had a little albuminuria, and suffered from pain over the liver, which was very small. Not long before he had a bad attack of right pleurisy after which his heart dilated and he had several attacks of angina pectoris but afterwards got well. About 10 years ago, after having been a teetotaller for one year, he had profuse hæmatemesis and was given up for dead.

CASE 2.—A married woman, 32 years of age, consulted me in November, 1897, complaining of pain in the epigastrium and left hypochondrium soon after taking food so that she often abstained from eating. She also suffered from constant pain referred to the right hypochondriac region (pain "in the liver," to use her own words) shooting up to the right shoulder and through to the back. In addition to these symptoms she complained bitterly of great weakness and depression, sleeplessness, and acidity. She was anæmic and constipated but there was no jaundice. She had suffered thus for 14 months and although she had for one year been under the treatment of a skilful and experienced man she was becoming worse rather than better, and he had told her that he could do nothing more for her. I had met her two years before and was appalled by her great loss of flesh and strength. She had been extremely stout but was now so emaciated, and her abdominal walls were so relaxed that it was easy to thoroughly examine every nook and corner of the abdomen. However, there was nothing to be detected except a small, tender spot in the epigastrium, a very small liver, and some right intercostal neuralgia. For six months I tried dieting, bismuth and opium, aperients, and tonics with but temporary relief to the pain and other complaints. I then prescribed large doses of mercury and iodide of potassium with the result that she immediately and rapidly improved, and in one month's time she said she was perfectly well and she looked so. She has remained quite well ever since.

The personal history of this patient was that she had been twice married and had had two children by each husband, all of them being alive and healthy. She had had no abortions. Her first husband had suffered from epileptic fits and had died at the age of 39 years from pain in the stomach and vomiting of blood and pus.

CASE 3.—In August, 1898, a married woman, 54 years of age, consulted me complaining of food accumulating in the stomach for about four days, causing great distension, discomfort, and thirst, a condition which was followed and relieved by profuse vomiting. Her abdomen was very flaccid and her stomach was enormously dilated. She was feeble, anæmic, emaciated, and melancholic. The interest of the case for my present purpose centres in the fact that she had suffered in this way since five years before, when she had a

growth obstructing the pylorus which four medical practitioners had pronounced to be malignant; but a fifth said it was not malignant and he prescribed some medicine which dispersed it in a month. Her husband had died at 50 years of age from some disease of the nervous system.

Of course one cannot generalise from three cases, but as all the patients were married women I have wondered whether married women may not suffer more than men from rare forms of tertiary syphilis, seeing that they so often acquire the disease in a peculiar way and in a mitigated form, the virulence being so reduced that they may never suffer from (or at least show) any of the primary or secondary manifestations and may thus escape treatment.

If confronted with a lesion of the nervous system we are almost too prone to immediately set about searching for evidences of past syphilis. If there be an intractable ulcer of the skin one at once hears the whisper, Is it syphilitic? If we find a localised lung disease we think of syphilis as the possible etiological factor. Then why do we so rarely think of syphilis when a patient is suffering from chronic gastric disease which defies ordinary treatment? We know that syphilis is prone to attack the mouth and throat, the rectum and anus—i.e., the entrance and the exit of the alimentary canal—and it seems reasonable that it should sometimes attack the cardiac and the pyloric ends of the stomach, for they are narrowed portions of this much-used and terribly-abused organ often greatly irritated and favourite sites for disease. Still we rarely suspect that an attack of gastritis or a gastric ulcer or morbid growth is syphilitic. I read in a recent work[1]: "It is a remarkable fact that whilst the mucous membranes and submucous tissues of the mouth, pharynx, tongue, and rectum are very commonly involved, the intervening stomach and intestinal canal are hardly ever affected by tertiary syphilis." Perhaps the truth is that they are affected more frequently than we suspect and that our diagnosis is at fault. At any rate, it behoves us to remember the possibility of syphilis when we are treating obstinate gastric disease. Perhaps, also, I should remind my readers that the finding of evidences of past syphilis does not prove that the lesion before us is also syphilitic.

Bloemfontein, Orange Free State, South Africa.

NOTE ON TWELVE CASES OF EPILEPTIC INSANITY TREATED BY MEANS OF BROMIDE OF STRONTIUM.

BY J. G. SMITH, M.D. EDIN.,
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IN the following note on the treatment of epilepsy by means of bromide of strontium I wish to direct attention to a few points in connexion with the action of this drug and to compare the results obtained by its use with those obtained by the use of bromide of potassium in the same cases over a corresponding period.

Twelve cases of epilepsy which had been treated at various times by different drugs—including borax, arsenic, and a few others—were selected for the purpose of the experiment from a large number of confirmed cases which had been under observation for years and in which daily records had been kept of the number of seizures. These 12 cases were under treatment during 1898, when bromide of potassium was used; all treatment was stopped for four weeks and bromide of strontium was then substituted and given regularly for over five months, which was the period which was covered by these notes. The plan followed in each instance was to begin with 15 grains three times daily and to increase this amount, at intervals of one week if necessary, to 20 grains, and then to 30 grains and 40 grains three times daily until the seizures were under control. In only one instance was it necessary to go beyond 40 grains three times daily and then the patient became stuporose and unsteady of gait, but without any abatement in the number of the seizures. The same result in this particular case followed the use of either drug. No special regulation of the diet was made but occasional doses of sulphate of magnesia were given.

Taking the cases individually and tabulating the results in the form of a chart it was seen that in four cases practically no indication of the superiority of either drug could be detected. In five cases bromide of strontium seemed to be rather more suitable than bromide of potassium and in three cases the latter was distinctly more beneficial than the former. Again, taking the cases collectively and reducing the results to chart form, bromide of strontium seemed to give the better results, the total number of fits being diminished, but there were certain points in favour of bromide of potassium. 1. There was only a very slight difference between the effects produced by the two drugs, though what difference there was was clearly in favour of bromide of strontium as regards the absolute number of fits. It was also found that the seizures of patients when under this drug were in some instances of a milder type than when they were under the potassium salt—in one case especially this was very marked—whilst the tendency to cause the appearance of a bromide rash was much less marked in the case of bromide of strontium than in that of bromide of potassium. 2. A larger dose of bromide of strontium than of bromide of potassium was required to control the fits, the largest amount of bromide of potassium required being an average dose of 20 grains, whilst it was necessary to give an average dose of 30 grains of bromide of strontium to produce the same result. 3. The bromide of potassium seemed to exercise its action more quickly than the bromide of strontium, for after the former drug had been given for five weeks the seizures were under control, but it was not until the end of the seventh week that the same result was brought about by the latter. 4. The good effect of bromide of potassium seemed to be more lasting than that of the bromide of strontium, as it was found necessary to increase the dose of the latter at shorter intervals than in the case of the former.

It would seem, therefore, that whilst bromide of strontium is in some cases apparently of greater value than bromide of potassium in controlling epileptic seizures, yet on account of the more rapid action of the latter and its more lasting effect, the smaller dose required, and, lastly, its cheapness, bromide of potassium must be regarded as the more generally useful drug in the treatment of epilepsy.

Hanwell, W.

[1] Article on Syphilis in Treves's "System of Surgery."

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriâs collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A FATAL CASE OF POISONING BY CRYSTALS OF PERMANGANATE OF POTASSIUM.

(Under the care of Dr. CHARLES R. BOX.)

THE symptoms in poisoning by permanganate of potassium are to be ascribed in part to the toxic action of the manganese and the potassium and in part to the oxidising effect of the substance. In endeavouring to discover a suitable antidote for the poison the powerful oxidising effect must be utilised and it has been suggested that as alcohol can be readily oxidised it should be freely applied, but it is doubtful if the value of alcohol for this poison is founded on anything firmer than theory. The fatal result in the case recorded below was probably due to the effect of the poison after absorption.

A married woman, aged 47 years, of very intemperate habits, after drinking heavily, took a "handful" of crystals of permanganate of potassium and throwing them into a teacupful of beer drank the mixture. This occurred at 11.40 P.M. She was immediately taken to the casualty department of St. Thomas's Hospital, arriving about midnight. On the way she is said to have vomited. When first seen she was pale, conscious, but was unable to speak. Her lips, chin, fingers, and the front of the right forearm were

stained dark-brown. The tongue was much swollen and was almost black in colour. The breath smelled strongly of stale beer. The skin was dry; the pulse was moderately rapid and of fair tension. After a few moments she struggled into a sitting posture and her breathing became accompanied by slight stridor. Preparations were immediately made for tracheotomy, but before anything could be done she fell back pulseless and the respiration stopped. By the stethoscope the heart could still be heard beating faintly and very slowly, although no pulse was perceptible at the wrist. Artificial respiration induced one or two respiratory movements, but beyond this was of no avail. The heart sounds ceased altogether a few moments later. Death occurred 35 minutes after taking the poison. In the bottom of the teacup from which the poison had been drunk was a black treacly mass evidently resulting from the action of the permanganate on the organic matter of the beer. The permanganate had been contained in a paper bag and was such as is used by the London vestries for street watering in the hot weather. Analysis showed the crystals to consist of permanganate of potassium only.

Necropsy.—The post-mortem examination was made 13½ hours after death by Dr. Colman, who found that the chin, the lips, and the interior of the mouth were stained a deep brown by the poison. The front part of the tongue was swollen and almost black, whilst the back part was of a deep mahogany colour. The upper part of the epiglottis was blackened and so, too, was its laryngeal aspect. The glottis was œdematous in a moderate degree. A small speck of blackening was seen on the anterior wall of the trachea below the glottis, but with this exception the mucous membrane of the trachea was natural in appearance. The stomach was moderately distended and showed no signs of inflammation externally. It contained about two pints of fluid with which was mingled a black insoluble powder and some parchment-like masses. The latter were probably portions of food. The gastric mucosa was coated with a black granular powder which was closely adherent to it and could not be washed off. On scraping away the incrustation, the mucous membrane was found to be intensely hyperæmic, presenting a bright pink blush. The destructive action of the salt was evidently very superficial. A little of the black deposit had escaped into the duodenum. The mucous membrane here was also hyperæmic, but there was no incrustation. The liver was enlarged and appeared fatty. The portion of the spleen near the stomach was soft and pultaceous; the rest of the organ was normal. The kidneys were tough and somewhat diminished in size; their capsules were adherent, leaving granular surfaces when stripped; the cortices were wasted. The left ventricle of the heart was hypertrophied and exceedingly firmly contracted. The cusps of all the valves were thickened. The lungs were deeply congested and œdematous. There was somewhat extensive atrophy of the left superior frontal convolution of the brain and a considerable subarachnoid collection of fluid lay over it.

Remarks by Dr. BOX *and* Dr. E. F. BUZZARD.—Fatal poisoning by permanganate of potassium appears to be a very rare occurrence notwithstanding the large quantities of permanganates which are now used for deodorising purposes. We have therefore thought it advisable to record the above case. Little or no reference is made in the current text-books on toxicology and forensic medicine to the poisonous action of permanganate of potassium. We are only aware of one recorded case where death resulted from the ingestion of this compound. Several writers, however, have called attention to toxic symptoms following its medicinal use, and in the experience of one of us local sloughing followed its subcutaneous injection in watery solution as an antidote for opium poisoning. The instances of poisoning which we find recorded are as follows. Thomson[1] records a case in which a large dose of solid permanganate of potassium caused corrosion of the pharynx and death in five hours from cardiac paralysis. This case is quoted by Dixon Mann in the second edition of his "Forensic Medicine," *à propos* of the use of solutions of permanganate in the treatment of poisoning by opium. Harnack[2] records a case of poisoning following the external application of tannin and solution of permanganate of potassium. The symptoms, which consisted of local inflammation, fever, vomiting, and the passage of dark-coloured urine, are referred by him to the action of pyrogallol formed locally by the interaction of the two drugs mentioned. Bidwell[3] quotes instances where serious symptoms followed the administration of permanganate of potassium. The sufferers were young unmarried females who were under treatment for amenorrhœa. In one case two consecutive doses of two grains of the drug were followed by intense burning pain from the throat to the pit of the stomach and serious collapse. In another a dose of one grain of the solid salt was followed by similar symptoms. In the course of some correspondence[4] on the possible dangers attending the medicinal use of this drug allusion is made to ulceration of the mouth attributed to local action of permanganate, and a case of abdominal pain and collapse following the administration of the same drug is quoted by H. Powell. The actual quantity taken in the latter case is not quite clear. Whilst preparing this account another instance has been brought to our knowledge in which severe vomiting and collapse occurred after three two-grain doses had been taken at intervals. The patient was pregnant.

But little appears to be known about the action and method of absorption of the salts of manganese. Ringer and Sainsbury in their work on "Therapeutics" quote experiments made on frogs by Kobert with the object of testing the action of these salts. Small doses when injected were found to suspend voluntary movements whilst larger doses slowed the reflexes and weakened the heart. Still larger doses arrested the heart in systole. Lauder Brunton, quoting the same experiments, states that the heart is arrested in diastole. The original communication is not in our hands, but it is significant that in our case the systolic contraction of the left ventricle was most unusually marked. There seems to be some doubt whether the salts of manganese are capable of being absorbed by the alimentary tract. No doubt permanganate when swallowed would be speedily reduced on coming in contact with the organic matter in the stomach, and of course in the case under consideration a part would have been previously reduced in the beer in which it was added. The reduction would be facilitated if the gastric contents were unduly acid at the time of ingestion of the poison. The reduction would result in the formation of the hydroxide of manganese which is insoluble. The granular coating of the stomach probably consisted of this salt. It is quite possible, however, that soluble manganese compounds were also formed and it must be borne in mind that potassium salts would also be present so that the poisonous action of the compound may have been in part due to these latter. With regard to the proper method of treatment we are not aware of any specific antidote. Judging from the condition of the coats of the stomach in our case no local mischief would have been inflicted by the use of the soft stomach-tube.

[1] Petersburger Medicinische Wochenschrift, 1895.
[2] Deutsche Medicinische Wochenschrift, 1895.
[3] Boston Medical and Surgical Journal, vol. cxv., p. [illegible].
[4] Brit. Med. Jour., vol. i., 1895.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

TWO CASES OF SUBCONJUNCTIVAL RUPTURE OF THE SCLERA, WITH RETROFLEXION OF THE IRIS WITHOUT DISLOCATION OF THE LENS AND WITH THE SUBSEQUENT RETENTION OF PRACTICALLY NORMAL VISION IN EACH CASE.

(Under the care of Mr. HENRY EALES and Mr. WOOD WHITE.)

THE very satisfactory result with regard to vision in both of the following cases is chiefly due to the fact that the lens was not dislocated although the sclerotic and iris were ruptured. For the notes of the cases we are indebted to Mr. Henry E. Thompson, resident surgical officer.

CASE 1.—A married woman, 32 years of age, was, on Jan. 29th, 1899, admitted into the Birmingham and Midland Eye Hospital, under the care of Mr. Wood White, with an injury of the left eye alleged to be produced by a blow from a man's fist. The conjunctiva of her left eye was injected and ecchymosed. Situated in the sclera immediately above the cornea and slightly to the inner side was a swelling of the size of an almond, which was dark coloured and had the conjunctiva stretched over it so that it had the appearance of a ciliary staphyloma. The cornea was clear. There was a large hyphæma and a coloboma of the iris extended upwards and

inwards corresponding to the swelling. The fundus was not visible. Vision with the left eye amounted only to discerning fingers at a distance of one foot. The tension was − 2. The cornea of the right eye was occupied by an old leucoma. There was a divergence of 20°. The vision with this eye amounted only to discerning fingers at a distance of two feet. The treatment adopted was rest in bed and the employment of ice compresses consisting of pieces of lint placed in ice and water and constantly applied to the eye; the pupil was also dilated with atropine drops and a mixture containing five grains of iodide of potassium was administered three times a day. On Jan. 31st the hyphæma of the left eye was undergoing absorption. The pupil was almost fully dilated; the fundus was not visible. The tension was − 1. On Feb. 2nd large membranous vitreous opacities were visible in the left eye; they appeared to radiate from the staphyloma and seemed to be the remains of blood-clot. On the 6th there was less injection of the conjunctiva and the staphyloma was not so prominent. On the 9th vision with the left eye was $\frac{6}{24}$ with $\frac{+ 0{\cdot}50 \text{ D. sph.}}{- 3{\cdot}50 \text{ D. cyl. axis } 135°}$. The vitreous opacities were still present. On the 24th vision with the left eye was $\frac{6}{18}$ with $\frac{+ 2{\cdot}50 \text{ D. sph.}}{- 6 \text{ D. cyl. axis } 135°}$. The staphyloma was now diminishing in size. On May 18th the staphyloma had almost disappeared and there was seen in its place a scar which was situated upwards and inwards, being 15 millimetres in length and of irregular outline. The outer extremity was about one millimetre from the margin of the cornea and the inner extremity was about two millimetres; the latter bulged slightly. Ophthalmoscopic examination showed the margin of the lens in the position of the coloboma. The fundus was normal. Vision with the left eye was $\frac{6}{12}$ with $\frac{+ 3 \text{ D. sph.}}{- 9 \text{ D. cyl. axis } 120°}$. The eye is still under atropine.

CASE 2.—A man, 43 years of age, was, on March 24th, 1899, admitted into the Birmingham and Midland Eye Hospital, under the care of Mr. Henry Eales, suffering from injuries which had been produced by a blow from a piece of stone whilst he was mending the road. There was great ecchymosis of the conjunctiva of the left eye. Situated directly on the outer side of the cornea was what appeared to be a small rupture of the sclera the outline of which was rendered indistinct by the ecchymosis. There was no bulging; the cornea was clear; there was a large hyphæma. There was a large coloboma of the iris situated directly outwards corresponding to the rupture. The fundus was not seen. The vision of the left eye amounted only to discerning fingers at a distance of three feet. The tension was − 3. The right eye had been disorganised and shrunken for many years and had no visual perception. The treatment adopted consisted of rest in bed, the frequent application of ice compresses, the use of atropine drops, and the administration three times a day of a mixture containing five grains of iodide of potassium. On March 25th the hyphæma was smaller and the ecchymosis of the conjunctiva was deeper. On the 27th fingers could be readily discerned with the left eye at a distance of four feet. On the 28th the ecchymosis was less and there was no hyphæma. The tension was − 2. On the 30th the tension was − 1. The lens appeared clear with the exception of remains of blood-clot on the outer side. The fundus was normal. On April 4th the conjunctiva of the left eye was of a deep chocolate colour. The vision was $\frac{3}{9}$ with $\frac{- 1{\cdot}50 \text{ D. sph.}}{+ 3{\cdot}50 \text{ D. cyl. axis } 90°}$. The tension was minus. On May 16th the conjunctiva was still of a deep chocolate colour. On the outer side was seen a V-shaped scar in the sclera with the choroid showing through. The extremities of the V, which were about four millimetres apart, were situated about one millimetre from the margin of the cornea and the apex about four millimetres from the margin. There was a coloboma of the iris corresponding to the scar. Ophthalmoscopic examination showed the margin of the lens in the coloboma with a few slight opacities near the margin on the anterior surface. The fundus was normal. The vision of the left eye was $\frac{6}{9}$ with $\frac{- 1{\cdot}50 \text{ D. sph.}}{+ 3{\cdot}50 \text{ D. cyl. axis } 90°}$. The eye is still under atropine.

Remarks by Mr. THOMPSON.—In each case the propriety of operation for the removal of the iris entangled in the tissue of the sclera was discussed but deemed to be inadvisable. The chief points of interest shown by these cases are: (1) the strength of the suspensory ligament of the lens, inasmuch as dislocation did not take place; (2) the fact that a traumatic cataract was not produced, a thing which readily takes place with some rupture of the capsule and may take place without; (3) the circumstance that the blow, though considerable, did not cause detachment of the retina or rupture of the choroid; and (4) the recovery of practically normal vision by each patient, for the $\frac{6}{12}$ vision which was eventually possessed by the first patient is as much as is often obtained in a case of mixed astigmatism with an oblique axis. It may be noted as a coincidence that in each case the right eye was useless as a visual organ. The term "retroflexion of the iris" is borrowed from Mr. Treacher Collins's "Researches into the Anatomy and Pathology of the Eye" (p. 125), where an excellent description of this condition is given. The final point to be mentioned is that the eyes are still under atropine, so that the effect on the accommodation has not been ascertained. My thanks are due to the honorary surgeons, Mr. Henry Eales and Mr. Wood White, for their kindness in allowing me to record these cases.

Reviews and Notices of Books.

Manual of Human Physiology. By LEONARD HILL, M.B. Lond., Lecturer on Physiology, London Hospital Medical College. London: Edward Arnold. 1899. Pp. 484. Price 6*s*.

THE author accurately describes the limits and scope of this little book in the preface when he states that it is suitable for school teachers, nurses, higher classes of schools, and for medical students as an introduction to larger text-books. It covers, indeed, about the same ground as does Huxley's well-known small volume on Physiology. The author has very successfully avoided the use of technical terms which pre-suppose a knowledge of the subject. His language is simple and his style is interesting and the book abounds in apt and homely illustrations and similes. The earlier chapters devoted to elementary physics and chemistry not only convey to the student such portions of these subjects as are necessary to the understanding of pure physiology but serve the philosophical end of showing the true position of man in the physical universe of which he is only a part. We are lead from a consideration of matter and energy through the chemistry of elements and carbon compounds to the properties of protoplasm, and then tracing organism in its increasing complexity of structure we arrive at its highest development in man. Simple as is the language, this book has been conceived in a thoroughly scientific spirit of personal observation followed by logical deduction. At every stage the student is instructed how to carry out for himself such simple and inexpensive experiments and observations as will make his knowledge real and not a mere list of bones and other structures or a string of technical terms. When joint are described he is instructed to purchase and dissect sheep trotters. Tendons are to be obtained from ox tails, and so on in every section. Anyone who conscientiously works through this text-book will not only gain a sound knowledge of physiology but will be grounded in a thoroughly scientific method of observation and deduction. The illustrations are clear and well illustrate the text, although with the exception of those borrowed from Testut and some executed by Mr. Colhoun they are not of a very high order. The author has not, however, limited himself to a dry description of parts or a lifeless list of the functions which they serve. In every section practical points related to it are discussed, popular errors are dissipated, and frauds are exposed.

The rules for the artificial feeding of infants are given and explained as a part of the description of Milk, and under Respiration there is an admirable section on Ventilation

which concludes as follows: "The more a man tries to protect himself from illness by over-clothing, shutting windows, and staying indoors for fear of catching colds, by over-eating to keep up his strength, by idling for fear of over-working, the less likely is he to keep himself in vigour and in health." It is, however, when dealing with patent medicines and foods that Dr. Leonard Hill shows himself a stalwart opponent of quackery and fraud, as appears from the following quotations from Chapter xxiv. "The method of fortune-making by advertisement is to sell a well-known and cheap article at a dear price under a new name with a new flavour added for disguise." Of patent pills he says that "they are compounded of common drugs which the quack buys for a few pence a pound and sells for a shilling an ounce," and he laments that the British Government is behind the rest of Europe in allowing its people "to be fooled and defrauded of millions of money by quacks whilst the Government, to its disgrace, does nothing to protect the poor, the weak, and the ignorant from them." A little further on we read that "the ox in the cup" is a figment of the advertiser's brain and cannot be obtained by any process whatsoever. Not only do these practical points give interest to the book, but the author shows a wide intellectual grasp in his introduction of the subject of each chapter. Frequently he follows in simple narrative the lines of the original researches of the pioneer in that branch of physiology. We are thus pleasantly informed of the work of Galen, Harvey, Stephen Hales, Beaumont, and many others. Quaint quotations from Rabelais, Bacon, and Shakespeare also serve to enliven the text. The book, however, is not without small errors, especially in its earlier chapters. Normal saline solution is not 6½ per cent., as stated on page 6 and again on page 118; indeed, a few lines lower on page 6 the directions for making it are correctly given. Nor is a 1 per cent. saline solution made by adding a gramme of salt to 100 cubic centimetres of water (page 5). There are too in places errors in English and in sense which should have been eliminated in proof-reading. With these trivial exceptions the book is accurate, simple, and scientific, and in many places philosophical, and we can heartily recommend its perusal.

LIBRARY TABLE.

Revue de Gynécologie et de Chirurgie Abdominale. May-June, 1899. Paris: Masson and Co.—The following articles appear in this journal. The Results of Resection of the Cervix from the point of view of Subsequent Pregnancies and Labours, by Professor S. Pozzi; Total Abdominal Hysterectomy (before full term) for Fibromata Complicated by Pregnancy, by Professor A. Monprofit; an Account of some Experiments upon Angiotripsy, by M. N. Ratchinsky; Benign Infection of the Peritoneum of Operative Origin, by Professor Auché and Professor Chavannaz; Two Cases of Immediate Spontaneous Reduction of an Internal Strangulation during the course of a Laparotomy, by Professor Ed. Schwarz; a Contribution to the Study of Appendicitis based upon 180 Necropsies, by Professor Tuffier and Professor Jeanne; Strangulation and Gangrene of the Upper Part of the Rectum in Cases of Uterine and Ovarian Tumours, Surgical Intervention, by M. Jules Boeckel; an obituary notice of Professor Georges Assaky, the late director of the Gynæcological Institute of Bucharest, is contributed by Professor Pozzi. The number includes the usual analysis of current literature and bibliography.

Annales de Gynécologie et d'Obstétrique. Vol. li., June, 1899. Paris: G. Steinheil.—This number contains the following original articles. 1. The Transitory Acetonuria of Labour, by M. A. Couvelaire. 2. Anuria in a Case of Cancer of the Uterus treated by Nephrostomy, by Professor M. Chavannaz. 3. The conclusion of their article upon the Treatment of Cancer of the Uterus by Total Abdominal Hysterectomy by MM. L. Picqué and P. Mauclaire. A report is given of a case of Tetanus of Uterine Origin by Dr. A. Turenne, and also of the very interesting case of Homicidal Injuries to the Vagina and Rectum reported in THE LANCET of May 13th of this year by Dr. Hainworth. The Proceedings of the Obstetrical and Gynæcological Society of Paris and the usual bibliography conclude the number.

Some Health Aspects of Education. By Dr. PERCY LEWIS. London: The Scientific Press, Limited. 1898. Price 1*s.*—This pamphlet discusses in a clear and concise manner some medical aspects of education; it shows that the development of the brain is dependent on good health and the proper observance of ordinary physiological laws. The sanitary and physiological laws chiefly dealt with are those most commonly neglected. Two variations of the normal child are taken—the "neurotic" and "lethargic" types—and their treatment is indicated. Other points touched on are "Backwardness," "Corporal Punishment," "Variety of Diet and Occupation," the question of school for delicate children, and the necessity of medical inspection of schools. To many parents this pamphlet will afford much valuable information.

The Elements of Physical Education. By DAVID LENNOX, M.D.Edin., late R.N., and ALEXANDER STURROCK. Edinburgh and London: William Blackwood and Sons. 1898. Pp. 241. Price 4*s.*—This manual is intended for teachers and is divided into three parts. Part I., written by Dr. Lennox, deals with the Physiology and Psychology of Muscular Exercise, which is presented, so far as it can be, in a popular style. Its object, as stated in the preface, is to show the relation of muscle to mind, thence proving the co-existence of muscular increase and the education of higher faculties. A few excellent diagrams accompany this portion. Part II. consists of drills and exercises (some original), all well illustrated, which are arranged in a consecutive and progressive series. Part III. contains various musical numbers to accompany the drills, composed by H. Everitt Loseby, Dundee. The style and typography of the book are good.

Among the Wild Ngoni. By W. A. ELMSLIE, M.B., C.M., F.R.G.S., with Introduction by the Right Hon. Lord OVERTOUN. Edinburgh and London: Oliphant, Anderson, and Ferrier. 1899. Pp. 320.—Dr. Elmslie, who is a medical missionary of the Livingstonia Mission, writes some chapters on this mission in British Central Africa in so far as it affects the Ngoni, a warlike and barbarous tribe of Zulu race who inhabit the territory north-west of Lake Nyassa. In reading such a book the almost insurmountable difficulties that have to be faced in converting these heathen into decent men can be thoroughly realised. This work is carried out on four great lines—viz.: (1) the direct proclamation of the Gospel; (2) education of young and old; (3) medical mission work; and (4) industrial training. Ngoniland itself is about 100 miles long by 70 miles broad. The description of a native village as given in Chapter 2 is very well put and gives the reader a good idea of the native mode of living. Dr. Elmslie gives it as his opinion that these natives have more sickness than civilised people, being much troubled by indigestion and fever. With reference to their belief in witchcraft we read: "The characteristics of the witch doctor are a pretended superior knowledge to discern the affairs of individuals and communities, and ability to hold intercourse with the ancestral spirits. It is not an hereditary craft such as that of medicine men who have a knowledge of herbs, but the witch doctor is supposed to be chosen by the ancestral spirits and when chosen presents certain symptoms. When he recovers and again enters society he is looked upon with awe and is instructed by an old witch doctor in various practices but he is not allowed to graduate until he discovers

some potent medicine and gives proof of his ability to discover things secreted by those assembled to test his prowess." The story of how the Ngoni become more peaceable and civilised indicates the amount of patience and tact required by anyone connected with mission work of any nature, concerning which some good advice is given. We cannot fail to be struck by the greater hold which the medical missionary obtains over such tribes; his work is practical work—something done—and appeals to them, especially if they or theirs have been ill and cured. A good index and map of British Central Africa are supplied; the illustrations are good but here and there the construction is decidedly loose, a fault which the bestowal of a little care would have avoided.

Clear Speaking and Good Reading. By ARTHUR BURRELL, M.A. With a preface by P. A. BARNETT, H.M.I. London: Longmans, Green, and Co. 1898.—The preface tells us that this book asks for self-control, quiet, decency in school-speech as in other speech, and for audibility, which is the very first condition of effectualness; certainly a careful perusal ought to point out clearly the way to attain that end. We are all aware, especially schoolmasters, of the general slovenly speech of the boy and the annoyance which it causes the master and the class; the fault, however, does not always lie with the boy. Any attempt to obviate this defect deserves credit, still more so when "the attempt" is made in such a well-arranged form.

University and Social Settlements. Edited by W. REASON, M.A. London: Methuen and Co. 1898. Price 2*s.* 6*d.*—This is one of a series (Social Questions of To-day) of volumes on topics of social, economic, and industrial interest that are at the present moment foremost in the public mind. The topic treated in the volume before us is, as the title implies, the work and uses of settlements. This comparatively new social feature is the outcome of that social force which has made the several grades of rich and poor to live in separate quarters of our large towns. About 14 years ago Toynbee Hall was founded in Commercial-street, E., as a memorial of Arnold Toynbee and as a practical outcome of his teaching, and since then the number of settlements have largely increased and will, no doubt, go on developing, for the principle of self-sacrifice involved is a sound one. The book consists of several chapters written by men competent by experience and knowledge to speak on the subject in an impartial manner and it is easy as we read to estimate at its proper value the good work done by these settlements in raising the poor and squalid from the "slough of despond." A very interesting chapter is contributed by A. Sherwell, M.A., on the Relation of the Settlements to the Labour Question.

JOURNALS.

The Journal of Physiology. Edited by Sir MICHAEL FOSTER, K.C.B., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. xxiv. No. 5. London: C. J. Clay and Sons. July 28th, 1899. Price 6*s.*—The following articles are contained in this number: 1. On the Modifications of the Metabolism produced by the Administration of Diphtheria Toxin, by Dr. D. Noel Paton, Dr. James Craufurd Dunlop, and Mr. Ivison Macadam, with one figure in the text. In these experiments bitches were used which were supplied with a definite diet for several days until nitrogenous balance was reached, then kept fasting for one day, and then again placed on the same diet. At the end of this period a dose of diphtheria toxin sufficient to cause a rise of temperature was administered hypodermically and the animal was made to fast on the following day. The excreta were carefully collected. The nitrogen was estimated by Dr. Dunlop, the chlorine, sulphur, and phosphorus by Dr. Paton, and the potassium and sodium by Mr. Macadam. Amongst other conclusions at which the experimenters arrived were that there is a marked increase in the proteid katabolism, that the neutral sulphur is increased, that the proportion of phosphoric acid to nitrogen is to a marked extent diminished, that there is no marked alteration in the proportion of potassium and sodium, and that the excretion of chlorine is materially diminished. 2. The Relative Volume or Weight of Corpuscles and Plasma in Blood, by Professor G. N. Stewart. Two methods were tried—a colorimetric and an electrical. In the dog it was found that the quantity of serum varied in different individuals from 40 to 74 per cent. of the total volume of the blood. 3. The Physiological Effects of Peptone when Injected into the Circulation, by Professor W. H. Thompson, with eight figures in the text. The results obtained were that as regarded coagulation ampho-peptone retarded blood coagulation and anti-peptone hastened coagulation, and that with each of the primary and secondary albumoses both phases of coagulation were observed. In regard to blood-pressure all of the ingredients of Wille's peptone with the exception of anti-peptone possess vaso-dilating properties, the intensity of effect being in the following order, proceeding from the lowest to the highest: ampho-peptone, deutero-proteose, hetero-proteose, and proto-proteose. The two first-named substances reduce vaso-mobility, but to a far less degree than the primary proteoses. 4. The Electrical Response of Nerve to two Stimuli, by Mr. Francis Gotch, with eight figures in the text.

ANNUAL REPORT OF THE COMMISSIONERS IN LUNACY.

THE fifty-third Report of the Commissioners in Lunacy states that the total number of lunatics in England and Wales on Jan. 1st, 1899, was 105,086, being an increase on the corresponding number on Jan. 1st, 1898, of 3114, the largest annual increase yet recorded. During 1898 private patients increased by 231; pauper patients by 2868; and criminal patients by 15. The proportion of total lunatics to the population was 33·11 per 10,000, the corresponding ratio for 1898 being 32·48. For 1899 the proportions of the three divisions of private, pauper, and criminal patients to the population are respectively 2·73, 30·13, and 0·25 per 10,000. The total number of admissions in 1898 (excluding patients transferred) was 19,314, of whom 9383 were males and 9931 were females. The admissions classified as private, pauper, and criminal patients were respectively 2085, 17,019, and 210. On Jan. 1st, 1899, the proportion of total paupers to population was 2·59 per cent. and the proportion of total pauper lunatics to total paupers was 11·64 per cent. During 1898 there were 7121 patients discharged as recovered and 4901 as not recovered. The deaths during the same period were 7602. The daily average number resident in 1898 was 80,408, the corresponding number for 1897 being 77,645, while in 1880 it was only 61,846. The table showing the distribution of lunatics as on Jan. 1st, 1899, according to administrative counties, county boroughs, and boroughs, assigns 21,043 to London, 3832 to the county of Lancaster, 2735 to the West Riding of Yorkshire, 2677 to Liverpool, 2314 to Kent, and smaller numbers to other localities. The Commissioners remark that in 1898 the recovery rate was unfavourable, being 36·87 per cent. of the total number of admissions (excluding cases of transfer, re-admissions owing to lapse of reception orders and admissions into idiot establishments), as compared with 38·81 per cent., the average rate for the 10 years 1889–1898. The number of county and borough asylums on Jan. 1st, 1898, was 74, and this has been increased by the opening of a part of the new asylum for the county of London at Bexley and the asylum for the borough of Middlesbrough. We shall at an early date publish an extended review and analysis of this valuable report.

THE LANCET.

LONDON: SATURDAY, AUGUST 12, 1899.

THE holidays of 1899 are upon us in an acute form. Whatever the profession may think of holidays there is no reason to be in any doubt as to the opinion of the public on the subject. Every stratum of society is permeated with the notion of getting away from the duties and responsibilities of life and that for an ever-increasing length of time and at an ever-increasing distance from the field of ordinary work. There are certain people who divide their time almost equally between work and change. As soon as they return from one holiday they begin to arrange the time and place of the next. They seem never to be at home except when they are from home. Their holiday is a moving one; they do not abide in one place and scarcely in one country; they are mostly "on the road." Egypt, India, China, Japan, Australia are their landmarks and the restless ocean is their highway pending the time when the Siberian railway and other schemes will enable them to get round the world in three weeks. Travelling on such a scale, of course, is beyond the means of the great majority of people and it is not to be regretted that it should be so. Such constant locomotion is an evil. It is not a holiday; it is not rest—it is restlessness. But short of this an amount of time and a proportion of income never dreamt of by our forefathers are devoted to the purposes of holidays. Even the poor nowadays contrive to obtain a peep at the sea or at the country, and, thanks to the ever-growing sympathy of society, the children of the poor in our large towns, through the country holiday funds, get that acquaintance with nature which was impossible to the children of towns of the last generation. The richer classes find more and more that the pleasure of their own holiday is increased when they have contributed to a similar enjoyment on the part of their poorer neighbours.

The least holiday-making profession is the medical profession. With the sister professions the case is quite different. The clergy of all denominations, whatever their sharp theological differences, all agree on the necessity for a good month's or six weeks' holiday. In law the whole machinery of the High Courts is suspended for a long vacation and the law's delay takes almost an absolute form for two or three months. But with the medical profession it is altogether different. Not a few medical men never sleep away from home, and when at home they lie with the ear open for the night bell all the year round. A very large number of practitioners content themselves with a week, or at most two weeks, of holiday in the year, and are only forced to that by indications of breakdown which they dare not disregard. The habit of labour is formed by the very nature of the medical profession and by the practice of the medical art. A pressure is put on a medical man to forego his holiday which scarcely resembles that put on other professional men. This is especially true of the general practitioner. His relation to his patients becomes almost a social and a personal one, and as the time for a holiday comes round and those whom he has known for years are in a plight of sickness or even danger he leaves them with a reluctance only less than that with which he would leave a member of his own family in similar circumstances. Added to this is the difficulty of providing a substitute or a locum-tenent. In remote country districts where the monotony of life much needs to be broken this difficulty is felt very acutely and the good doctor almost despairs of his needed change. The difficulty is said to have been much increased by the recent action of the General Medical Council in forbidding the employment of unqualified assistants. We have no doubt that this is so and will continue to be so for a time. Qualified assistants and locum-tenents are so much more in demand that their price has gone up to the great inconvenience of the medical practitioner whose patients are poor and whose fees are small. But such facts, though powerful, are not final. They have to be adjusted and they are capable of adjustment. The ultimate effect of the abolition of the unqualified assistant must be to increase the appreciation of medical service and with it the means of the medical man to take a regular and a longer holiday. One other effect of this abolition should be to make members of the profession practising in the same place more neighbourly, more helpful to each other, and more trustful. It is in this direction that the true strength of the profession lies and every change in it which tends to make medical men realise how much they can help one another and how helpless they are without a mutual disposition of this sort will enhance the ease of medical life and facilitate the holiday which every practitioner needs.

Whatever the difficulties of arranging a holiday it is clear that it must be considered more and more as a necessity of life, only less so than food and clothing. The pressure and pace of life are unprecedented. We live through as much in a month as our forefathers did in a year and the very habit of society in making so much of holiday makes it imperative that we should do the same. A holiday is an education in itself and it takes the mind out of parochialism and provincialism more successfully than any other method. Without this education we lose influence with an important section of our patients and actually fail to acquire some very useful knowledge. The reluctance to leave patients is to be overcome in their interest as well as in that of the practitioner. Intelligent patients quite realise this and often say so. These arguments, which are of perpetual force, are especially so in a season like the present. The prosperity of the country is admitted on all hands and must enable even medical men who have too little share in such general prosperity to take a holiday with a little more ease than usual. The very beauty of the summer invites us forth to "fresh woods and pastures new." The heat has been unusual and withal somewhat exhausting. So we counsel all our readers to seek freedom from the toil and worry of their professional duties for a space of at least a month, and

let them not forget after arranging such respite for themselves to be willing to do as much as lies in their power to facilitate a holiday for any weary neighbour.

MEMBERS of the medical profession are unfortunately very liable to have charges made against them by those who are either entirely ignorant of the matters concerned or are misled by false statements, the object frequently being either to obtain cheap notoriety in the locality in which the traducers dwell or to obtain revenge for some imaginary slight cast upon them by the practitioner. Whatever may be the circumstances or the object of the libel it is extremely trying for the practitioner and may entail a state of affairs amounting to ruin. A case in point was tried at the assizes held at Birmingham on August 4th and the following day before Mr. Commissioner ENGLISH HARRISON, Q.C. This was an action for libel brought by Mr. HUGH CAMERON KIDD, M.B. Lond., F.R.C.S. Eng., a medical man in practice at Bromsgrove, against Mr. A. J. CRANE, a baker, and a member of the Bromsgrove Urban District Council. Dr. KIDD is the medical officer of health of the town of Bromsgrove and of the North Bromsgrove Urban District, and also of the Bromsgrove, Redditch, and Droitwich Joint Isolation Hospital, and it was in reference to his conduct at this hospital that the allegations were made. Fortunately for Dr. KIDD he is a member of the Medical Defence Union and the case is one typical of the value of this excellent society to members of our profession. The council of the Defence Union undertook all the responsibilities of the conduct of the case, instructed solicitor and counsel, and thus saved Dr. KIDD an immense amount of worry and anxiety besides relieving him of costs.

The charges which the defendant brought against the plaintiff, and which were published in a local paper on Sept. 17th, 1898, were mainly and briefly as follows: they amounted to neglect, malpraxis, and mismanagement of the hospital generally. It was alleged that a "patient was in the hospital one week and three days and never saw the doctor once, and all the six weeks and three days she was there she never had one drop of medicine." With reference to a death which took place in the institution the defendant alleged that although the patient (a little girl) was in great agony for two days the medical officer did not see her, and that she was frightened by a threat of being put into "boiling blankets" to make her keep quiet in bed, that the medical officer actually ordered this treatment, and that the girl died whilst undergoing it. Further, that "men, women, youths, and boys and girls had to eat, drink, lie and sleep all in one room"; also that the hospital was so badly constructed that rain came into the building, and that the wind could be felt by the patients as they lay in bed. These charges, together with others, were first made at a meeting of the Bromsgrove Urban District Council; Mr. CRANE was offered an opportunity of formulating his charges but did not take advantage of it, and as they were not withdrawn the action for libel was brought against him. Dr. KIDD had no difficulty in entirely rebutting all the charges. It was shown by the evidence that the patient who was in the hospital without seeing the medical man for 10 days and received no medicine was admitted at a late stage of the disease, that convalescence was not interrupted, that she required no medicine, that it was not true that Dr. KIDD did not see her for 10 days after her admission, and, further, it was shown that she was the defendant's aunt. The little girl was niece to the woman already mentioned. Nephritis set in as a complication of scarlet fever and she died from uræmia. A hot-pack was ordered as a means of treatment—hence the statement about "boiling blankets"—but the disease was too far advanced for it to be of any avail. It was also proved that Dr. KIDD was indefatigable in his attendance on the patients. The hospital was only a temporary one—a hospital marquee tent with double canvas walls. It was well ventilated, but when there was heavy rain the water trickled down in one or two places, the beds, however, being carefully removed from the damp. The patients were mostly young children, but whilst the woman already referred to was an inmate there were two boys as patients, about 15 or 16 years old. They occupied the same large tent, but their beds were thoroughly screened off from the other beds and Dr. KIDD had heard no complaints. There had been over 60 patients in the hospital in the year and only four had died. Other charges were similarly disproved and the jury had no hesitation in returning a verdict in Dr. KIDD's favour with damages of £150, the foreman adding that had it not been for the position of the defendant they would have given much heavier damages.

Dr. KIDD will receive the congratulations of all members of the medical profession on having so completely vindicated his character. It is very trying, but it cannot, unhappily, be prevented, that charges of this kind should be so frequently made. The medical man is placed in a most difficult position and very often for many reasons he has not the power to take such decided steps as did Dr. KIDD. The result shows the value of the work of associations founded for medical defence. Although an evil-disposed person is willing to enter the law-courts against a single individual who, he thinks, will be unable to adequately defend himself, he will hesitate if he knows that his victim is backed up by a powerful society whose aim it is not only to support its members, when they are attacked, by the potent means at its disposal and to take action in such cases as the one to which we have referred, but also to prosecute quacks, to aid the Government in suppressing such crimes as abortion, and generally to take every opportunity to support the honour and prestige of the medical profession.

THE providing of the working-classes in our great towns with wholesome sanitary homes and the encouragement of all those who are willing to assist in the enterprise are matters of so great importance that it is not easy to understand by what process of reasoning the London County Council can have arrived at the conclusion that it was desirable to prosecute Lord ROWTON, Sir RICHARD FARRANT, and all who are responsible for the admirable institutions known as Rowton Houses on the ground that they were keeping them as common lodging-houses without registering them under the Lodging-Houses Acts. Mr. E. W. GARRETT, the latest addition to the ranks

of London magistrates, in a clear and well-reasoned judgment has now pointed out that the question whether Rowton Houses are common lodging-houses is one of fact rather than of law; he has found that in fact they are not common lodging-houses and has dismissed the summons, while many of the points which he reviewed in giving his decision, when looked at by the light of common-sense, seem to condemn the action of the London County Council as unnecessary and mischievous. On the one hand, there was no defect of sanitation, no abuse or mismanagement which it was desired to put an end to and which might have been set right had they been declared common lodging-houses, but not otherwise. On the other hand, it was established by the evidence of Lord ROWTON that the stigma attaching to common lodging-houses among the working-classes and their employers would very seriously affect the utility of Rowton Houses and similar institutions were they compelled to stand on the same footing. This opinion of his Lordship, which bears the weight of experience, must have been well known to the London County Council or could and should have been ascertained by it if its own knowledge gained in following the movement of which Lord ROWTON has been the pioneer was insufficient for its guidance.

It may not have been material that Rowton Houses are philanthropic rather than charitable institutions giving to working men desirable and desired homes while returning to the promoters an average dividend of 4½ per cent. (a matter which should serve to encourage future enterprise of a similar character), but it certainly was of vital importance in considering their position in relation to that of "common" lodging-houses that their organisers exercise a discretionary power to select persons to be admitted to them, excluding the dirty and disreputable and maintaining the buildings as comfortable and cheap hotels or boarding-houses for deserving but poor men. The Lodging-Houses Acts of 1851 and 1853 were not framed with the definite intention that they should include Rowton Houses, for they were passed 40 years before Lord BEACONSFIELD'S former secretary and friend brought his scheme to a practical head. They could not be thought to include them prophetically under any definition of a common lodging-house, for by a happy-go-lucky practice not rare in Acts of Parliament they contain no definition of their own subject-matter. They also contain provisions inapplicable to Rowton Houses, ordering, for instance, periodical whitewashing of portions of the edifice which in the case of Rowton Houses are tiled. In these circumstances we can hardly believe that the prosecutors were advised by their learned counsel that they were sure of success; and if the result was doubtful and no abuse existed that needed remedy there can hardly have been any good reason for incurring and causing the expense of legal proceedings. It must further be remembered that these proceedings if successful would have tended to cripple and check the growth of an enterprise worthy of all encouragement; while even the existence of an abuse such as a defect of sanitation would not have converted Rowton Houses into "doss-houses," any more than the discovery that the servants in certain West-end residences were not provided with accommodation sufficient to satisfy enlightened ideas of sanitation would bring those residences within the provisions of the Factory Acts. It is a matter of regret that the London County Council, which has done so much good work for the great metropolis which it represents, should have been defeated in a contest which it entered of its own accord and in which the bulk of sympathy must be with the victors; but a finding of fact by a magistrate in such a case as the above constitutes a decision which is not likely to be appealed against and still less likely to be appealed against with success.

Annotations.

"Ne quid nimis."

THE POLICE SURGEONS' ASSOCIATION: THE FEES OF MEDICAL WITNESSES.

AT a meeting of the Police Surgeons' Association, held on August 3rd, at the Town Hall, Portsmouth, Mr. Nelson Hardy, in moving the adoption of the report of the Council, said that by far the most important subject dealt with was that of medical witnesses' fees which had already been before their society for several years. In 1895, when Mr. Asquith was Home Secretary, a deputation from the association waited on him at the Home Office, when he admitted the justice of the claim for a revision of the scale of fees but said that as that scale had been fixed on 40 years previously by Sir George Grey, and successive Home Secretaries since his time had been afraid of burning their fingers by touching it, he should follow their prudent example. This year the British Medical Association had taken the matter up and prepared a memorial for presentation to the Home Office, the authorities of which, however, refused to receive a deputation. Now that a joint committee of the British Medical Association and Police Surgeons' Association was about to be appointed another endeavour would be made to secure a hearing from those in authority to which as Englishmen they were fairly entitled, and the members of both the Police Surgeons' Association and the British Medical Association would be urged to get the Parliamentary representatives of their several districts to use their influence in the matter. The report was carried. Dr. Maybury of Portsmouth, Mr. H. W. Roberts of London, and Mr. Nelson Hardy of London were elected members of the proposed joint committee. The following officers and council were elected for the ensuing year. President: Dr. Lysander Maybury (Portsmouth). Vice-Presidents: Mr. Timothy Holmes (London), Mr. Thomas Bond (London), Sir H. D. Littlejohn (Edinburgh), and Mr. Houchin (London). Treasurer: Mr. H. Nelson Hardy (129, Dulwich-grove, London). Honorary secretaries: Mr. F. W. Lowndes (Liverpool) and Mr. H. C. Hopkins (Bath). Council: Dr. Barnes (Carlisle), Mr. J. R. Baumgartner (Newcastle-on-Tyne), Dr. J. F. Craig (Birmingham), Dr. C. Eastwick-Field (Midhurst), Mr. G. H. Heald (Leeds), Mr. W. J. Heslop (Manchester), Dr. D. McDonnell (Belfast), Mr. H. W. Roberts (London), Mr. W. M. Roocroft (Wigan), Dr. Charles Templeman (Dundee), Mr. W. Washbourn (Gloucester), and Dr. S. Wyborn (Windsor).

PURSER TESTIMONIAL FUND.

SOME of the former pupils of Professor Purser of Trinity College, Dublin, have been taking measures for the commemoration of the completion of his 25 years of activity as a teacher of physiology. The fund organised for the purpose has met with ready support, but the committee are conscious that it has not been possible for them to make the objects of the fund known to all who

have at one time or another benefited by Professor Purser's instruction. As already announced in our advertisement columns it has been decided by the committee that a "Purser Medal" shall be offered for competition annually at the June Half M.B. examination in physiology and histology. Subscriptions are only received from Professor Purser's past pupils and are not to exceed one guinea. The honorary treasurer is Dr. W. S. Haughton, 30, Lower Fitzwilliam-street, Dublin.

THE SILLY SEASON.

IT was widely circulated in the press recently that a woman at Fenny Stratford had given birth to six children. The story was a pure fabrication and the case was one of hydatidiform mole. The subject of multiple births is one which gossips love to dilate on and the artistic finish to the story as it was circulated—namely, that the bodies of the children had been "embalmed and sent to the Anatomical Museum of London"—was assuredly due to the lingering affection of a story-teller. The press seem to have swallowed the yarn with amazing credulity.

FINLAND AS A HEALTH RESORT.

WHEN towards the close of the eighteenth century Poland lost its liberty, chiefly through internecine folly and dissension, the feelings of that portion of Christendom which did not participate in the spoil were so deeply stirred that

> "Hope for a season bade the world farewell,
> And Freedom shriek'd—as Kosciusko fell."

In fact, so profoundly disturbed was society that persistent and sanguinary efforts to restore the dismembered kingdom to its former place among the nations of Europe did not finally subside for upwards of 50 years. Poland can scarcely be said to have deserved the ocean of sympathy that was poured forth metrically and otherwise on its behalf, but now that a somewhat similar fate has for no fault whatever befallen Finland it is a remarkable thing that very little public notice has been taken of the catastrophe and that the poets to a genius remain silent. The woes, whether suppositious or not, of more or less interesting Christians like the Armenians are enough to lash our emotional bards into frenzy, but the real grievances of the honest Lutheran Finns leave them cold. Finland is nevertheless a large and important country, half as big again as England, and its inhabitants, who in 1896 numbered 2,555,462 persons, are an industrious, well-conducted, and loyal race. "Caledonia stern and wild" may dispute with Jamaica the best right to be called the

> "Land of the mountain and the flood,"

but *par excellence* the Grand Duchy is the land of lakes, one-eighth of the whole superficies consisting of a network of sheets of water for the most part communicating freely with each other and also with the sea by means of locked canals. There are no lofty mountains in Finland, but the country is charmingly diversified by hill and dale, while waterfalls—that at Imatra being said to rank second only to Niagara—are in great abundance. Most of the inland commerce is carried on by means of steamers and sailing vessels, of which in 1896 there were no fewer than 4289 on the register. Good roads also exist, running round and between the lakes, and in winter advantage is taken of the ice to effect short cuts. At present the railways, which for the most part are the property of the State, extend over about 1500 miles, but every year the mileage is increasing. Considering its geographical position Finland possesses a mild climate, the average temperature in winter being 23·5° and in summer 58°F. As a rule rain falls on 162 days in the year, but although the total amount does not exceed 20 inches drought is less feared than moisture, especially during the summer and the autumn. The population generally speaking depends upon agriculture, about two and a half millions of acres being under cultivation. 64 per cent. of the surface is said to be covered with forests, the trees consisting mainly of pines, firs, and beeches. Registration of births and deaths is performed by the clergy, for whose guidance a short nomenclature of diseases has been drawn up. The care of the public health is in the hands of a council consisting of a director-general and three members, of whom two are medical men and the third an apothecary. Provincial medical officers, whose duty it is to supervise public hygiene, are distributed in populous districts; and practitioners, to whose maintenance the State contributes, are established in most of the rural parishes. When epidemics prevail the two classes work together. In the towns there are medical officers of health who are paid by the municipalities; and in all towns and villages commissioners of salubrity officiate under medical guidance.

A COUNTY MEDICAL OFFICER FOR MONMOUTHSHIRE.

THE Monmouthshire County Council have several times discussed the question of the appointment of a county medical officer and as a first step towards its realisation a motion was carried at the meeting of the Council held on August 1st affirming the desirability of appointing such an official and requesting the sanitary committee to inquire into the question and report to the next meeting of the Council. It has been the practice hitherto for the chairman of the Sanitary Committee to present to the Council an annual report upon the sanitary condition of the county as far as can be gathered from mere statistical returns. But something more than this is required in a district where the areas of the local authorities are so closely connected that it is absolutely essential for joint action to be taken as regards drainage, water-supply, or isolation hospital accommodation if the best results are to be achieved. At the May meeting of the Council the Western Valleys drainage scheme was spoken of as a highly important one and it was urged that it should be pushed on with as little delay as possible, but it transpired that the 19 urban and six rural councils who were concerned in the construction of the main sewer could not be brought into agreement and that several were not in a position financially to carry out the work, though on this last point one of the working-men councillors argued that the financial aspect ought not to be considered where life and death are involved. There is, without doubt, plenty of work ready for a medical officer in the county of Monmouth.

THE BOARD OF HEALTH, NEW SOUTH WALES.

THE Board of Health, New South Wales, when first formed in 1881 in consequence of an outbreak of small-pox, consisted of the Mayor of Sydney, the Under-Secretary for Finance and Trade, the Inspector-General of Police, the health officer, the Government architect, and Sir Alfred Roberts, M.R.C.S. Eng. It has been reconstituted by the Public Health Act (1896) which directs that it shall consist of not less than seven or more than 10 members (including the President), of whom four shall be medical practitioners. The Board of Health and the Medical Department are separate branches of the Department of Public Health, the former being subordinate to the Colonial Treasurer and the latter to the Chief Secretary. In some respects the functions of the Board of Health and of the Medical Department differ widely, but they have nevertheless several points of contact. The principal work of the Board is to administer or execute eight Acts of Parliament relative to supervision of dairies, noxious trades, and cattle-slaughtering, infectious disease (small-pox) prevention, diseased animals and meat, and leprosy; also

the Public Health Act, Quarantine Acts, and Abattoir Act. Although so many years in existence it is only during 1899 that the Board has published a report. This first report deals with the events of the year 1897; including its appendices it fills 55 large pages and is signed by Dr. J. Ashburton Thompson, chief medical officer of the Government and President of the Board. Considerable space is devoted both in the report and in the appendices to the methods for the limitation of tuberculosis in the human subject, in food animals, and in dairy cattle. Precise directions are given for enabling dairymen, butchers, and persons engaged in several noxious trades to comply with the Acts affecting them. Pig-keepers and poultry-farmers are included in this class and a large lithographic folding plate is attached to the report showing how their establishments may be carried on with the least possible nuisance. Two large steamers were quarantined for small-pox during the year; after cleansing and disinfection the vessels were handed over to the agents for unloading in 92 and 98 hours respectively; 108 of the crew and passengers were detained in quarantine for the full term of 21 days, being those in whom revaccination failed and those who declined it. Only three cases were reported as small-pox but they all turned out to be chicken-pox. Three cases of leprosy were discovered; two were admitted to the lazaret and one was allowed to return home to Queensland.

A SPECIAL COMBINATION OF SIGNS FOUND AT THE ONSET OF PHTHISIS.

THE early diagnosis of phthisis has been one of the most difficult and most important problems presented to the practitioner. The greater hope of cure now held out by the open-air treatment renders it still more important. At the meeting of the Société Médicale des Hôpitaux which was held on July 21st Dr. Ch. Fernet called attention to a special combination of signs—"*syndrome*"—found at the onset of the disease, which appears to have great diagnostic value. It consists in the simultaneous existence of physical signs on the same side at the apex of the lung, in the interscapular space in the locality of the bronchial glands, and at the base of the lung. The appearance of the first signs at the apex of one lung is of course well known; on this most practitioners exclusively base the diagnosis. Change in the respiratory murmur, adventitious sounds and modification of the percussion note awaken fears, and if the general health has failed and some emaciation, pyrexia, night sweats, or even hæmoptysis, have occurred, the diagnosis is almost certain. However, there are numerous cases where the practitioner may hesitate: perhaps the physical signs are ill-marked and doubtful so that it is thought that they may be due to emphysema, or partial fibrosis secondary to pneumonia or broncho-pneumonia. Then the complementary phenomena to be described acquire their value and often decide the question. Tracheo-bronchial adenopathy frequently accompanies pulmonary tuberculosis and appears at the beginning, and, as in the adenopathy of other infectious diseases, the glands are largest in the initial stage. The signs of the adenopathy are then most apparent; they are distinct from those of the pulmonary lesions with which later they are commingled. The diagnosis of the adenopathy is not difficult if it is looked for; there are dulness and resistance to the finger in the interscapular space on the side of the diseased lung at the level of the upper dorsal vertebræ; on auscultation hollow, almost cavernous, breath sounds are heard, the expiratory sound being the louder and longer. These signs are clearly separate from those of the pulmonary lesions which are found in the external part of the supra- and infra-spinous fossæ. At the same time there is often axillary adenopathy on the diseased side—a fact which apparently has not been pointed out before. Dr. Fernet finds that it is very common. The third focus of which signs are encountered on the diseased side is situated at the base of the lung behind. Here diminution of percussion resonance and sub-crepitant râles are frequently found. These basic phenomena are not described by writers because they are not looked for. Dr. Fernet described them 20 years ago, but Grancher is the only writer who has insisted on them. Although diminution of resonance on percussion is most usually found sometimes in places there is slight tympany. On auscultation, sometimes there is weakness of respiratory murmur, sometimes harsh inspiration, and sometimes fine crepitation resembling the crepitant râle of pneumonia; more often the sub-crepitant râle is present. These phenomena Dr. Fernet thinks are due to a difficulty in the lymphatic circulation produced by the glandular affection—an engorgement of the lower part of the lung with results analogous to what is observed in the faces of strumous subjects with diseased cervical glands. The influence of gravity would explain the limitation of the engorgement to the base of the lung. Thus, these three sets of phenomena are connected like the links of a chain: the tuberculosis of the apex is the initial lesion; the tracheo-bronchial adenopathy is directly associated with, and secondary to, it; and the basic engorgement appears to be dependent on the adenopathy.

SEWAGE DISPOSAL.

A FREQUENT difficulty in the sewering of low-lying districts is that the system cannot be completed by gravitation only, the necessary point of discharge being frequently below the level of the desired outfall. A common practice is to form a sump or chamber above which pumps are situated which lift the sewage into reservoirs at a higher level, and it can then be subjected to any desired treatment. Among very many examples of such conditions near London may be mentioned Edmonton, where at the sewage works the sewage is lifted by very powerful steam engines into a subsidence reservoir, from which it is discharged on to the land. Another similar condition of things exists at Hampton. Here, however, the well-known system instituted by Messrs. Shone and Ault is adopted. An engine working an air compressor forces into a stout iron main a current of air. Branch mains conduct this compressed air to various points of the sewerage system, at each of which is fixed one of Shone's ejectors. These work automatically, and upon becoming charged with sewage from the drains a series of valves are opened which admit the compressed air and force the contents of the ejectors up to the requisite elevation, whence the sewage can fall by gravitation. In the Hampton works it is discharged into one of Dibden's filters. This scheme has now found general acceptance. Felixstowe is a notable instance of its adoption. The long-suffering authorities of Bombay, after giving this system a lengthened experimental trial at their outfall at Colabar, are about greatly to extend its application in the island. It is true that some of our leading engineers, among them Mr. Baldwin Latham, object to this system upon the ground that a large amount of air is unnecessarily fouled to be discharged again into the atmosphere more or less at the ground level; but this objection may be open to question, there being compensatory advantages—viz., the smaller size of the sewers used, together with the absence of deposit in the same, while the large amount of air present under pressure probably causes a more rapid oxygenation of the organic particles present and prevents any accumulation of objectionable gases. Another system, Liernur's pneumatic system, seems likely to become popular in continental towns. This overcomes the difficulty of

gravitation by an air-tight system of sewerage in which a vacuum is created and the sewage is sucked into a closed chamber fixed at central points in each district of a town; from these chambers it is conveyed into a steam concentrator and is there heated to about 100° C. The water is distilled off, the gas is burned under the furnace, and the sterilised sludge is dried and sold for manure. At present no installation of this method exists in England, but there appears to be a probability of its introduction, notwithstanding that some of the details are not in accord with English ideas. A deputation of experts recently visited Trouville-sur-Mer to inspect such a system, now in existence there with a view to its probable introduction at Manningtree, Essex. The question of outfall would thus seem to have been satisfactorily dealt with in the case of any considerable public installation, but the same difficulty frequently presents itself in small undertakings. Here, in whatever way the sewage may be disposed of other than into a cesspool, some fall is necessary for passing it through a filter or tank. The principle of the ejector can be applied upon a modified scale for lifting the sewage to the required height. A small iron tank receives the sewage. This tank is of varying size, according to the requirements and is fitted with a flap valve on the end of the inlet pipe, which valve opens to admit the sewage into the tank, closing again to prevent its return. The outlet pipe dips to within an inch or two of the bottom of the tank, and passing out horizontally near the top is likewise provided with a similar valve, allowing the exit of the sewage but preventing its return to the tank. A smaller pipe connected with an air compressor worked by hand, or with water or other power available—it can be rendered automatic—enters the top of the tank where it is fitted with a stop valve. When the indicator which is provided shows the tank to be full the valve is opened, when the air from the compressor blows the contents of the tank up the outlet pipe to the required elevation. A very similar arrangement is, we believe, in use at the Electric Railway now in progress of construction in London for blowing liquid cement, &c., into the interstices between the iron cylinder forming the tunnel and the surrounding ground.

OVERCROWDING IN MANCHESTER.

MANCHESTER and Salford are each trying to do something to lessen the overcrowding of some of their poor districts and at the same time to provide open spaces. The latter has recently bought the site of the infantry barracks in Regent-road, consisting of about 10¼ acres, for £38,500. It is proposed to build shops and small houses and to leave an open space of some acres. The demolition of insanitary property and the requirements of the railways have involved the displacement of considerable numbers of people, 1500 of whom this scheme is expected to provide for. The estimate for the carrying out of these improvements is £149,900. As one of the Council observed they might regret dispossessing so many poor people, but when in some of these slums the death-rates were 100 and 104 per 1000 he thought that something should be done. In one district the death-rate has been 60 per 1000 for over five years. It is not expected that the very poorest will occupy these houses but those just above the poorest. The problem of the decent housing of the lowest stratum of the population is not yet solved. At the meeting of the Manchester City Council on August 5th it was unanimously resolved to appoint a committee with the view of purchasing the site of the Hulme Cavalry Barracks (about 11 acres) and such other sites "as may be required to meet the needs of the people in respect to the proper housing of the poor, baths and wash-houses, and recreation ground," &c. The soldiers were removed from these barracks in 1890 mainly because this crowded and slummy district was bad both for their physique and *morale*. Mr. Maben, who brought forward the motion, gave many instances of the terrible overcrowding that was very general in this part of Hulme. In one case a father, mother, and six children all slept in a room 8 feet by 6 feet. The window would not open and there was no fireplace. In another case the father, mother, and two children slept in a small room with the fireplace papered up, the window made fast, and the door made to fit close to keep out the cold. The parents had to earn their living and were short of work. "One night the youngest child was asphyxiated." The prevalent idea among the largest portion of the poor is to keep warm and if this can be accomplished they care little about the foul and poisonous air which they breathe. Nor is this to be wondered at if we try to realise the benumbing, deadening effect of cold on the thinly clad and underfed. In spite of all efforts it seems as if the raising of the "submerged" of our cities will remain for an indefinite period unaccomplished and their condition continue to be a reproach to our civilisation.

SUNSTROKE AND THE PATHOLOGICAL CHANGES PRODUCED BY IT IN THE BRAIN.

MUCH of the pathology of sunstroke has hitherto been matter of speculation. The first studies of changes produced by its agency in the brain cells which were carried out with the aid of modern technique we owe to Van Gieson[1] and Lambert.[2] In three cases these observers found throughout the central nervous system extensive changes in the nerve cells and affecting mainly the chromatic bodies of Nissl. The changes consisted in partial or total disintegration of these bodies or in alterations in their form and diminution in their number. Other changes were also observed in the nuclei of the nerve cells. These various changes were regarded as evidences of an acute parenchymatous degeneration of the neurons resulting from the action of an autogenous poison which was supposed to be the basis of the symptoms in sunstroke. In a recent contribution[3] Dr. James Ewing of Columbia University, New York, gives a valuable record of three cases of sunstroke in which the nervous system was examined by Nissl's method. In the first of these cases the patient was a male, aged 45 years, who was found unconscious in the street from sunstroke. He was brought to hospital unconscious, comatose, and cyanotic, with stertorous breathing, dilated pupils, and feeble pulse. He passed his stools involuntarily and the temperature was found to be 110° F. The patient died in the ice pack 15 minutes after admission. The necropsy was held 18 hours after death and showed intense congestion of the viscera and an unusual fluidity of blood. The brain and spinal cord were quite firm. Microscopical examination with Nissl's method revealed the following conditions. In the spinal cord the anterior cornu cells showed characteristic changes, appearing of a diffusely stained and pale-blue colour. The nucleoli were enormously swollen and pale and were surrounded by a number (from six to 10) of large deeply-staining granules. Under a high power it could be seen that some cells still showed traces of Nissl's bodies either of the original form and size or swollen and fused together or evenly and minutely subdivided, but invariably very pale. Many nerve cells appeared to be entirely devoid of chromatic bodies. The nuclear membrane was often invisible (the changes in the majority of the nerve cells were indistinguishable from those found by Dr. Ewing in artificial pyrexia produced in rabbits by exposure to heated air). In the medulla nearly all the nerve cells showed the more advanced changes noted in the spinal cord. Here many cells were entirely colourless. Some of the Purkinje cells of the cerebellum were but slightly altered; many contained

[1] New York State Hospitals Bulletin, 1896, vol. i., No. 4.
[2] Medical News, July 24th, 1897.
[3] Archives of Neurology and Psycho-pathology, 1898, No. 3.

only a few slender and very pale chromatic masses and some were devoid of chromatic bodies. As regards the cerebral cortex the usual nuclear changes were very prominent and the chromatolytic changes were advanced, most of the cells failing to show distinct chromatic bodies or network. In the posterior spinal ganglia the chromatic bodies in most of the cells were pale and minutely subdivided, while many were absolutely colourless. The nucleoli of these cells were much swollen. In the second case—viz., that of a male, aged 38 years, there was a previous attack of sunstroke for which he had been successfully treated a week before. The present attack rendered him unconscious and he fell from a waggon. He was admitted to hospital with the usual symptoms and with a temperature of 109·6° F. With treatment in repeated ice packs the patient partially rallied, the temperature during 24 hours ranging between 97·4° and 105°, but he finally died. The necropsy in this case disclosed but slight lesions in the bulbo-spinal cord and cerebrum, while marked changes were found only in the cerebellum. This case served to show that high temperature alone was inadequate to produce the changes in question.

MEDICAL "EX-VOTOS" IN ANCIENT GREECE.

IT is well known that a curious collection could be made of medical "ex-votos" discovered by recent excavations at various temples of Æsculapius. Models have been found not only of external, but sometimes of internal, organs of the body. About a year ago Dr. Lanciani presented to one of the Roman museums a little marble base bearing an inscription in Greek which is a votive dedication in honour of Æsculapius of a very laudatory nature. It tells us that the donor's cause of gratitude was that he had been cured of a tumour of the spleen by the god and in recompense for the deity's succour he made an offering of an image of the diseased organ. Unfortunately, the little model, probably of gold, has disappeared, nothing remaining upon the marble but the mark of the place where it adhered to the base. In the memoirs of the German Archæological School at Athens Herr Zingerle has published an interesting memoir upon a temple of Æsculapius at Lebena in Crete. It was known that the deity had a sanctuary at Gortyna near by, but the Lebena one is new. Among the texts from it is one referring to a votary with a wounded finger to whom the god appeared in a dream and indicated the requisite remedy which was the application of oil of mallows (*althæa*) and massage. It is known to scholars that when Æsculapius worship was introduced into Athens about B.C. 420 by Telemachos of Acharnæ, Sophocles the poet was looked upon as the first and principal patron of the god's worship. The cause of this position of Sophocles was unknown but is now ascertained. He was priest of an old hero deity or patriarchal quack named Amynos and it was as holder of this office that he naturally fell into the position of pre-eminent votary of the new medical cult. A temple has been disinterred at Athens dedicated to Amynos, Æsculapius, and Sophocles, as Dexion, the inscriptions upon which clear up the matter.

CONJUNCTIVAL ACTINOMYCOSIS IN SOUTH AMERICA.

DR. DEMICHERI publishes in the *Revista Médica del Uruguay* some notes of a case of conjunctival actinomycosis, a condition so rare that he has only been able to discover one recorded instance—that of a man who had resided in Buenos Ayres but who came under the observation of Dr. de Vicentiis in Italy. Here the bulbar conjunctiva was affected, a yellowish-grey granule like a canary seed being seen near the caruncle attached to a semi-transparent vesicle; a number of minute grey points could also be distinguished by means of a lens in the neighbouring conjunctiva which was of a reddish colour. The appearance gave the impression of a cysticercus, the "canary seed" being the head. An incision, however, was followed by the escape of fluid containing a number of minute granules which, as the microscope showed, consisted of masses of actinomycetes. The fungus had developed in a lymphatic canal which had become dilated so as to form the vesicle which had been mistaken for the caudal appendage of a cysticercus. In Dr. Demicheri's case, which was that of a young man in Montevideo, the part affected was the conjunctiva of the upper eyelid, on eversion of which about 15 yellowish-grey granules were seen near the superior tarsal border, mostly of the size of from a tenth to a fifth of a millimetre, some few being larger than this. The appearance suggested miliary tubercle. On examination with the microscope, however, the typical star-shaped fungus of actinomycosis was easily seen. The etiology of the case was not very clear as the disease is most common amongst country folk who are infected by means of straw or grass, and the patient was a town-dweller who had not been in the country and had nothing to do with the care of animals. The affection was successfully treated by excising the granules and by the administration of iodide of potassium.

PROVISION FOR HARMLESS LUNATICS.

THERE has been recently a great deal of overcrowding in the Belfast Workhouse and to relieve this congestion the guardians waited upon the Finance Committee of the corporation urging them to provide an auxiliary asylum for the reception of those harmless lunatics located in the workhouse. By doing this not only would the guardians obtain the accommodation they want but the corporation could claim the capitation grant from the Local Taxation (Ireland) account. The carrying-out of such a purpose would be expensive and the cost of maintenance the Finance Committee of the corporation ascertained would be 8*s.* per head instead of 4*s.* 5*d.* as at present, and the difference would mean 1*d.* in the £ to the ratepayers and it would entail a change in the rate as half the poor-rate was paid by the landlord. The committee decided to adjourn the matter until they could give the corporation some more definite idea of what the cost would be. This matter came before the asylum governors at their meeting on July 10th and after a long discussion it was decided that the Committee of Management of the asylum should, conjointly with the members of the corporation, inspect the workhouse, the asylum, and the grounds at Purdysburn with the view of coming to a final decision. The question of dealing with pauper lunatics is now giving rise to considerable discussion in Ireland, one set of people advising that they must be placed in the asylum, and this would accordingly entail additional and relatively expensive buildings being erected with an increased cost for the maintenance of these lunatics who are in the main harmless; while, on the other hand, many thoughtful people urge, why not devote portions of the present country workhouses which are unfilled to the special housing of harmless patients and thus avoid additional expense for new buildings? Everyone is agreed that the present arrangement of keeping curable or improvable lunatics in workhouses with other patients is a mistake and it is absolutely necessary that those who require special care and attention should be located in asylums; but there is another and a large class of pauper lunatics who are quite harmless and simply require warm and comfortable housing and proper food and who perhaps could do a little work in the grounds. Now many think that the latter class might very well be located in the

empty buildings of some of the country workhouses which, by the expenditure of a little money, could be prepared, as was done in the case of the Ballymena Workhouse, where in the year 1880 some 110 quiet chronic cases were sent from the Belfast Asylum and accommodated in the wings formerly used by boys and girls. Medically speaking, the ideal plan is to place, temporarily at least, all lunatics of every kind in modern, properly-constructed asylums until it can be determined as to which of these are curable and improvable, which require special asylum care for a considerable time, and which patients could be at once transferred to chronic wards or workhouses as being harmless and incurable chronic cases, and to avoid needless expense it would be necessary to make a selection of suitable cases and remove them to the asylum, leaving the harmless and chronic cases in the workhouses, as has hitherto been the case. This would obviate all avoidable expense and at the same time secure for the acute and curable or improvable cases the special advantages of asylum care and treatment.

"THE SPHERE OF A MATRON."

WE referred last week to the case of a patient at the Chelsea Infirmary whose recovery after an operation from hernia was stated to have been retarded by the matron's action in placing a pillow under his back without permission from the medical officer. A letter from the matron on the subject was read at a meeting of the board on August 9th. She disclaimed "any intention or desire to interfere with medical treatment and stated that 13 days had elapsed since the operation; that the instructions were that the man was not to be "turned on his side"; and that in response to his complaint of "soreness" in the ordinary course of nursing she placed a soft pillow under his back to prevent the formation of a bedsore and to avoid change of posture, an action not involving more movement than did the daily washing of his back, against which no orders were given. No hæmorrhage took place, as was alleged, and she added that the patient suffered from bronchitis and was subject to violent attacks of coughing. A letter was also read from the assistant medical officer who performed the operation, maintaining his view that the pillow caused the partial breakdown of the wound. A proposal to refer the matter to the general committee for further consideration was negatived by six votes to four.

THE TONIC PROPERTIES OF SEA AIR.

CONSIDERABLE speculation has from time to time been made as to what causes the invigorating and tonic properties of a sea-breeze. Ozone is very commonly accepted as at any rate an important factor in this connexion, since it is invariably present in air that has been in contact with sea-water, and especially agitated sea-water, and to a smaller extent in the air of the country, but it rarely occurs in the air of towns and crowded places. Ozone, however—and with it probably traces of hydrogen peroxide—is undoubtedly formed by air skimming over the surface of fresh water, and hence the breezes coming over the lochs in Scotland and large lakes and rivers in other places become ozonised and bracing. The Briton has an instinctive fondness for procuring his change or spending his holiday down by the water side, be it sea, lake, or river, probably because he finds, though he does not know exactly why, that the air of water-side places does him more good than the air of the country, where there are trees and beauties of landscape but no large tract of water. The freshness of the early morning air is due most probably to the formation of dew on the previous night, the transition from the vaporous to the liquid state causing ozonisation of the air with which the condensed watery particles come into intimate contact. This freshness disappears as the day wears on because of the readiness with which ozone is destroyed by organised and organic substances. The exhilarating effect of a sea-breeze may, however, be ascribed to other bodies which are foreign to inland air. Thus sea air contains a traceable amount of salt and iodides, attaining a maximum of 0·022 gramme per litre or about one and a half grains per gallon. These mineral ingredients derived from the sea doubtless accentuate the tonic action of sea air, and further it is probable that ozone interacting with chlorides and iodides would lead to traces of chlorine and iodine being present. Many persons describe the smell of strong sea air as iodous or chlorous, and it has even been said that the starch used in face-powders turns blue at the seaside on account of the iodine in the air forming blue iodide of starch. If that be so the blue and haggard appearance characteristic of many faces exposed to a strongly salt-impregnated breeze would find an interesting, but perhaps embarrassing, explanation.

THE WALKER SCHOLARSHIP AT THE DENTAL HOSPITAL OF LONDON.

MR. MORTON SMALE, Dean of the Dental Hospital of London, announces that an Entrance Scholarship of the value of £20, founded by Dr. Joseph Walker, will be awarded in October of each year. The subjects of the examination will be Dental Mechanics, Chemistry, and Physics. The examination will be held on Sept. 28th and 29th, commencing at 4 o'clock on the first date. Intending competitors are invited to send in their names a week beforehand to the Dean.

THE Departmental Committee on Preservatives and Colouring Matters in Food met on Saturday, August 5th, when there were present Sir Herbert Maxwell (chairman), Dr. Timbrell Bulstrode, Dr. F. W. Tunnicliffe, and Mr. C. J. Huddart (secretary). Applications from various associations to be heard by representatives in evidence were considered and the general question of the scope of the evidence to be taken was under discussion and settled so far as is at present practicable. Experiments within the terms of reference to the committee have been started in several directions.

THE alterations in the premises of the General Medical Council at 299, Oxford-street are now practically finished. Three good-sized and pleasant rooms have been constructed for the use of the Examination Committee, the Pharmacopœia Committee, and the Public Health Committee respectively. These, which form a new storey, add greatly to the accommodation of the building. The ventilation of the Council Chamber in May and June was felt to be very defective and will have to be amended.

EVERY alternate year for 17 years past the Baroness Patti-Cederström (Madame Patti) has organised a concert in Swansea in aid of the general hospital and other charities in the town. Not only does she herself take part in the programme but she induces other well-known artistes to volunteer their services, entertaining them at Craig-y-nos and bringing them by special train to Swansea. The last of this series of concerts was given on August 3rd and is considered to have quite eclipsed any of its predecessors. About £600 were realised.

LUNACY IN DORSETSHIRE.—At the quarterly meeting of the Dorset County Council held on August 1st Lord Digby, the chairman of the Asylums Committee, referred to the great increase of pauper lunacy in the county and stated that additional accommodation would shortly have to be provided although the new asylum had only recently been opened.

ARMY MEDICAL SCHOOL, NETLEY.

TERMINATION OF THE SUMMER SESSION.

THE seventy-eighth session of the Army Medical School was brought to a close on July 29th when the prizes were distributed by Sir GEORGE WHITE, V.C., G.C.B., G.C.S.I., G.C.I.E., Quartermaster-General to the Forces, who delivered a short address in the presence of Surgeon-General Jameson, C.B., Director-General of the Army Medical Service; Surgeon-General Harvey, C.B., D.S.O., Director-General of the Indian Medical Service; Sir William Mac Cormac, Bart., K.C.V.O., President of the Royal College of Surgeons of England; Deputy Surgeon-General Cayley; and the military and Nursing Staff of the Royal Victoria Hospital.

Colonel J. LANE NOTTER, R.A.M.C., read the report of the session. He said that a *précis* of the reports sent to the Secretary of State for War and the Secretary of State for India was contained in the printed slips which were distributed. It indicated the positions of the surgeons-on-probation of the Royal Army Medical Corps and Indian Medical Service as determined by the results of the London and Netley examinations. He said that the work of the session had been satisfactory and that 55 out of 58 surgeons-on-probation who had undergone the final examination had proved themselves fitted to receive Her Majesty's commission.

The following is a list of the prizes which Sir George White handed to the successful competitors, expressing a few words of friendly congratulation to each:—Herbert prize of £20: Mr. E. D. W. Greig, Indian Medical Service. Military medicine:—Martin Memorial (medal): Mr. E. Dykes, Indian Medical Service. Honourable mention: Mr. W. E. McKechnie, Indian Medical Service; Mr. W. C. H. Forster, Indian Medical Service; and Mr. D. McCay, Indian Medical Service. Military Hygiene:—Parkes' Memorial (medal): Mr. W. C. H. Forster, Indian Medical Service. Second prize, De Chaumont prize: Mr. W. F. Harvey, Indian Medical Service. Honourable mention: Mr. W. E. McKechnie, Indian Medical Service. Military Surgery:—First Montefiore Prize, medal and £21: Mr. H. H. Norman, R.A.M.C. Second Montefiore Prize (revolver): Mr. E. D. W. Greig, Indian Medical Service. Honourable mention: Mr. R. A. Cunningham, R.A.M.C.; and Mr. W. C. H. Forster, Indian Medical Service. Pathology prizes:—Sir Joseph Fayrer's Prize: Mr. E. D. W. Greig, Indian Medical Service. Dr. Wright's Prize: Mr. W. F. Harvey, Indian Medical Service. Honourable mention: Mr. J. J. Urwin, Indian Medical Service; Mr. F. J. Palmer, R.A.M.C.; and Mr. G. H. Irvine, R.A.M.C. Clinical and Ward Work Prizes (presented by Colonel McLeod in memory of Surgeon-General Maclean, C.B.):—Mr. W. F. Harvey, Indian Medical Service, and Mr. W. C. H. Forster, Indian Medical Service.

After distributing the prizes Sir GEORGE WHITE addressed the young officers. He said that he had been asked to say a few words to them, and perhaps he was entitled to do so from the long experience which he had had of the excellent work which had been done of late years by the Indian Medical Service and the Royal Army Medical Corps. Most of the service which he had put in had been passed in tropical climates, where, perhaps, they had exceptional opportunities of seeing the immense benefit which had accrued to the army as the result of the education which they received at Netley, and from the earnest and grand sense of duty which he had always found medical officers with the army ever ready to show. In India particularly he could remember the days when he was a captain in 1854. He was stationed in Gwalior and he remembered some 30 men of his own company dying from cholera. They buried them and that was about all they did for them. The men themselves understood the purifying effect of fire, and whether by accident or design he did not know, but at any rate the barracks caught fire and the cholera decreased after that. He was for five years Commander-in-Chief in India and with one exception, that of the East Lancashire Regiment, he could not recollect any really bad attack of cholera. Some three years ago the East Lancashires did lose between 90 and 100 men and the cause of the outbreak was traced indirectly to a system which had been condemned by the medical officers. The colonel of the regiment was too anxious to take every precaution for the sake of his men. In India they had learned that the way to fight the cholera was to run away from it. The colonel did run away, but carried with him filters which had been condemned. The sand, which was one of the component parts of these filters, had, he believed, been taken from a ford across one of the Indian rivers which was on the track of pilgrims and where pilgrims went they very often found cholera. They had the advantage of an investigation by experts, trained as those now leaving Netley had been trained, who diagnosed the whole case in a way which carried the conviction to his mind that it was the continuance of the use of the condemned system of filters which really in this one isolated case prevented the procedure laid down for cholera from having its usual beneficial effects. There was another complaint now which was the greatest trouble many of the gentlemen would have to face, not only in India, but at the Cape and elsewhere. He referred to enteric fever and he only hoped from the accounts which had come to him officially as Quartermaster-General of the Army that the medical school at Netley had started a system which would relieve them from the terrible loss which the army yearly incurred from what was actually the worst scourge which they had now to face. Some time ago the system of inoculation was brought forward and Lord Wolseley, who had the interests of the soldier at heart, looked upon it as being very visionary, and in that blunt way of his said he could not have the soldiers of the British army experimented on. However, these experiments had been followed by such marvellous results, largely due to Professor Wright of Netley, who had laboured on and had been enabled to tabulate results which had carried conviction not only to Lord Wolseley's mind but to that of Lord Lister who said that the results more than justified giving every soldier who went to India or the Cape the opportunity of being—he hoped he was not using untechnical language—vaccinated. There was another point which he could not sit down without firing off, and that was that from the year 1885 until 1898, during which period he was particularly well placed for noting the gallant acts in the Eastern Empire, where they were always fighting, he recommended more medical officers for the Victoria Cross than officers of any other branch of the service and he did not think he should be far wrong if he said than all the other branches of the service put together. This was no inflated bosh and he could almost give them the names of the men. It had always been a greater pleasure to him to recommend a medical officer for the V.C. than any other. Such grand instances had come under his notice of self-sacrifice and devotion to duty as of a man under a hot fire kneeling by a wounded brother officer and holding the artery to prevent bleeding to death. There was no very great credit due to a man who could rush on. In action, to a man of highly nervous temperament it was an absolute relief if he was sent on, but this self-sacrifice and self-control was one of the finest ways he had ever heard of in which the V.C. had been won. In conclusion Sir George White quoted figures showing the great reduction in the rate of mortality in the army brought about by the increased facilities for the study of the prevention and cure of diseases, and he said that these figures should induce them to take the fullest advantage of the education which they had received at Netley.

Surgeon-General HARVEY, who was cordially received, said that he was glad to have the opportunity of congratulating those who had chosen the Indian Medical Service, to which he belonged. He believed that they had done wisely, and if they gave to it the earnest study and devoted work which they must already have given to their profession he was quite certain that they would reap their reward in time. They should try, at all events, to remember that the best reward was the sense of doing their duty thoroughly because it was their duty and not because it might lead to good appointments. Men who took up their work in that spirit inevitably found that the reward came of itself in due course. They should not give too ready credence to the rumours that the service was going to the dogs and that it was not as good as it used to be. They had been saying that ever since he knew it. He was at Netley in 1864 and 1865 and it was said then that the Indian Medical Service was not what it was and that it was going to the devil. It had done extremely well so far and instead of going to the nether regions it was still advancing and had great possibilities in the future. To them, and to those who came after them, they looked to

carry on the traditions of one of the finest services in the world and to earn their own place in it as had been earned by many distinguished officers who had gone before them. He wished them all success in the service.

Surgeon-General JAMESON, C.B., said that he was very pleased to hear such a good account of their conduct and progress during the past session and he congratulated them on the successful termination of their course of study. He hoped that they would all enjoy themselves and have good fortune in the interesting life before them. The Director-General then proceeded to bring to their notice two excellent institutions, the Friendly and Benevolent Societies, whose claims and interests he warmly advocated. He congratulated them on having been addressed by Sir George White, than whom there were very few general officers in the service with a wider experience. He was Commander-in-Chief during the late war on the Indian frontier and probably in no other campaign were there so many natural difficulties encountered and surmounted. This could only be the result of good administration and for that good administration the Commander-in-Chief was mainly responsible. They were, indeed, honoured by Sir George White's visit and he asked them to unite with him in giving Sir George White a most cordial welcome to Netley.

Sir WILLIAM MACCORMAC congratulated them most heartily on having come out successfully from the ordeal of their instruction and teaching in that great institution, and as a civilian surgeon he should like to take that opportunity of expressing his very warm and cordial appreciation of the kind, sympathetic, and appreciative words addressed to them by Sir George White. He thought that nothing could more greatly encourage them in doing that duty which had been pointed out to them as the chief end and object of their life than to hear from a general officer of such great distinction as Sir George White the appreciative words which he had been good enough to address to them. They had been taught a great deal at Netley and were now going out into the world, where they would have to do something yet more—they would have to begin to teach themselves and the knowledge acquired by that kind of teaching was the most valuable which they could acquire. They had been trained heretofore in the methods by which they would be able to acquire knowledge for themselves and he trusted and believed that in the future they would turn those opportunites to account, and that they would turn out faithful members of the loyal service to which they had the honour to belong.

Surgeon-General NASH said that the session was now over and on behalf of himself, the professors, and all belonging to the hospital he bade them farewell and wished them all good luck and prosperity.

The list of successful surgeons-on-probation and of those nominated surgeons-on-probation were published in THE LANCET of August 5th, 1899, p. 363.

SIXTH REPORT OF MR. VICTOR HORSLEY TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

IN making this my sixth report to the Registered Practitioners of England and Wales I wish first to point out that the recent May session of the General Medical Council has been one of usefulness to the public and furtherance of the interests of the practitioner.

I. *Conduct of business of the Council.*—(*a*) Inspection of documents.—It will be remembered that a year ago the President of the Council immediately after his appointment (April 7th, 1898), issued a decree directed against myself to the effect that no member of the Council had any right to inspect the documents although he himself and the Registrar of the Council retained the full enjoyment of that privilege. This embargo of the President was supported at the May session, 1898, by an erroneous opinion furnished by Mr. Muir Mackenzie, the legal assessor to the Council, and thereupon the Council itself on Dr. Glover's motion passed a Standing Order making it practically impossible for any member of the Council to gain access to any document. This embargo of the President also had the further effect of preventing me in May, 1898, from discovering what was being done in the scandalous prosecution of the late Mr. Hunter. I am glad to be now able to report that this gravely unconstitutional procedure of illegal secrecy received its deathblow at the November session, 1898, when on my moving in the Council that the Hunter and other documents should be produced and when such production of documents was strongly resisted by the President, Mr. Carter, Dr. MacAlister, and a few others, the vote of the Council was largely in my favour in each instance. Ultimately Dr. Glover's objectionable Standing Order was referred to the Executive Committee for reconsideration. At the May session just completed the Executive Committee presented their report which completely surrendered the claims of the President. The result is that the unconstitutional action I protested against has been entirely abrogated and the rights of the members of the Council are now, after 12 months' futile and expensive delay, fully restored to them as they were before April 7th, 1898, when I was first refused access to the documents. This is a very distinct victory for constitutionalism and it is to be hoped that we shall not have any more absurd attempts to introduce a despotic *régime* which is entirely out of date in the affairs of this or any other public institution.

(*b*) Character of the work of the last session.—The work of the last session was characterised by a much greater output of effective business than the previous sessions and especially because all questions on the programme received proper attention and were not hurriedly and injuriously dismissed at the last days of the session as has been the invariable and objectionable custom of previous years.

(*c*) The Hunter case.—In the session just concluded I at last against an unscrupulous resistance headed by Mr. Carter gained an opportunity to draw attention to the procedure of the officials of the Council in relation to the Hunter case. Although it was arranged beforehand on my insistance that the law officers of the Council should be present when my notice was brought forward, both were absent at the time appointed, and even though the matter was further postponed to secure their attendance only the solicitor to the Council came to the Council. He did not venture to question the accuracy of my charges against him regarding his breaches of duty. I proved that the late Mr. Hunter, L.S.A., was wrongfully described to the Council by the law officers in November, 1897, as being a quack practising with a bogus M.D. degree, and I proved that the Council's Penal Cases Committee had herded him with some quacks for presentation to the Council as a fit subject for prosecution under Section XL. of the Medical Act, 1858. I further proved that the solicitor without the slightest authorisation from the Council prosecuted Mr. Hunter on a charge which had never been laid before the Council at any time nor even did the minutes of the Penal Cases Committee show that that body had ever discussed such a charge—viz.: that Mr. Hunter, L.S.A., a registered practitioner, wilfully and falsely (although qualified under the Act of 1886) styled himself "physician and surgeon." In the first place, therefore, I established the fact that the direct and primary responsibility for this abominable prosecution rested upon the law officers to the Council and this charge, I repeat, the solicitor who was present never attempted to repel. The second breach of the procedure of the Council which I have now to report in connexion with the Hunter case was the action of the Penal Cases Committee. This committee is not a statutory committee and it has no right to spend the money of the profession in instituting actions at law except under the immediate and particular direction of the Council itself, nevertheless this committee took upon itself in a wholly illicit manner to order that Mr. Hunter's appeal which had been taken into the High Court should be resisted and without any authorisation from the Council they instructed the law officers of the Council so to act. The law officers of course ought to have refused to act without the proper and legal instructions from the Council, but in accordance with the rest of their behaviour in this unhappy case they took upon themselves to join the proceedings in the Appeal Court, actually illicitly assuming the authority and name of the Council to do so with the result that as everyone knows a so-called judgment was obtained which was a farrago of ignorance and rubbish and has only had the effect of rendering the use of medical titles and especially of all university degrees by medical practitioners most unsafe. The persons upon whom this responsibility rests made no serious attempt to vindicate themselves

and chiefly sought shelter in silence. Mr. Carter, the chairman of the Penal Cases Committee which resolved to attack Mr. Hunter, made a speech which was nothing but personal abuse of myself. Dr. Glover, who was also a member of the committee, first misrepresented what I stated and then declared that Mr. Hunter was a gentleman who enjoyed being ruined in order that he should afford material for a test case on the use of the word "physician." Further comment on this transaction is unnecessary, but the cost of it must not be allowed to fall on the profession.

(*d*) The conduct of the legal business of the Council.—Knowing full well how the legal business of the Council has been conducted for years, and especially in regard to the penal cases, I moved last session and carried a resolution instructing the Penal Cases Committee to draw up a report on the procedure they adopted and of the cost of the same with suggestions for improvement. That committee evasively reported that no improvement was possible in the legal procedure of the Council or in saving money paid for law expenses. I am glad to say that on my motion the Council immediately repeated its instructions to the Penal Cases Committee to continue their investigations and to again report to the Council at its next session. As regards the law officers of the Council, who are constantly spoken of as the legal assessor to the Council and the solicitor to the Council respectively, I asked at the recent session for the record of the appointments of these gentlemen and elicited the fact that no such appointments had ever b en made at all. It is obvious, therefore, that the Council is at liberty to employ any legal assistance it may prefer.

II. *Personation and fraudulent misrepresentation of the Register.*—At the session, November, 1898, I carried a motion in the Council instructing the Executive Committee to draw up a report on fraudulent personation of registered practitioners and on the best method of securing accurate registration. In accordance with every other occasion on which the Executive Committee were ordered to report to the last session that committee returned a report which was useless for its intended purpose. In view of the importance of the subject and the obvious necessity of the Council fulfilling its elementary duty of keeping the Register correctly, the Council on my motion took the matter out of the hands of the Executive Committee and entrusted it to a special committee to report during the session. The special committee, of which I was appointed chairman, duly reported, but when the report was presented the Council recognised that the subject was an extremely complex and important one and it was therefore agreed that the determination of the alterations which the committee suggested ought to be made in the procedure of registration and in the work of the office should be postponed till the November session of the present year.

III. *Reciprocity question.*—The question of reciprocity of foreign practice came up before the Council under two distinct heads. It may be remembered that after my exposure of the erroneous character of the Council's official document on the subject in the May session, 1898, that paper was referred to the Executive Committee for report. The report of the committee which was also full of inaccuracies was brought up for discussion at the November session, but the discussion was postponed and the same thing again happened this session. Inasmuch as the document in question is not only misleading but directly injurious to the profession it is a matter of congratulation that it should still remain in abeyance. At the last session, however, the reciprocity question came up in a totally different and more pertinent form—viz., on a species of international bargain which was proposed by the Italian ambassador and concerning which the Executive Committee had already illegally taken it on themselves to make a statement to the President of the Privy Council. In that statement the Executive Committee had expressed a desire to see the privileges and rights of medical practitioners in this country extended to all foreigners who could offer the privileges of practice in their own country. The adoption of the Executive Committee's principle would, of course, render entirely nugatory the whole system of medical education and registration in the United Kingdom. Many further defects which also were not foreseen by the Executive Committee having been brought to the notice of the Council the matter was postponed to the next session.

IV. *On the examinations for higher qualifications.*—It will be remembered that certain Fellows of the Faculty of Physicians and Surgeons of Glasgow being aggrieved by the scandalously insufficient nature of the examination held by the Faculty for the Surgical Fellowship made a representation on the subject, as they thought, to the General Medical Council. Their communication was, however, owing to a slight flaw in the address, taken by the President and then rejected by him on the ground that the character of the examinations for the higher diplomas did not come within the purview of the General Medical Council. This position being totally contrary to the Medical Act of 1858 I endeavoured to raise the question on the point of complaint made by the Fellows of the Faculty, but the matter was prejudiced by the President drawing attention to the verbal error before mentioned and the question was postponed by the previous question being carried. On a subsequent day I brought up the matter on its strictly legal aspect without reference to the particular case of the Glasgow Licensing Body, but the motion was lost by reason of a number of members of the Council abstaining from voting. In this particular the division list on page 72 of the Minutes of the Council (Vol. XXXVI.) is interesting because it shows that abstention from voting was resorted to in order that the view expressed by the officials of the Council should be protected regardless of the facts of the case.

V. *Illegal certificates of proficiency in medicine, surgery, or midwifery.*—This important matter, prejudiced as it was by the language and terms of the memorials presented to the Council from the Corporate and Medical Reform Association, was treated very unsatisfactorily by the Council. The Executive Committee had had the matter referred to them and had of course reported to the effect that nothing ought to be done. Thereupon Mr. Brown and I moved that a special committee be appointed to report on the subject at the next session. Our amendment was lost, those voting against this matter which so clearly needs close attention in the interests of our profession being Dr. MacAlister, Mr. Bryant, Sir Dyce Duckworth, Dr. Pettigrew, Dr. McVail, Dr. Heron Watson, Dr. Bennett, Dr. Philipson, Dr. Reid, Dr. Cameron, Mr. Carter, and Sir John Tuke. It should be noted that nine members of the Council had already left the session.

VI. *Medical aid societies.*—With regard to the serious matter of medical aid associations the committee appointed under the chairmanship of Dr. Glover to report to the Council on that subject at last presented their long-looked-for report. Practically that report dealt with only two points: first, it proposed the appointment of a Conciliation Board; and, secondly, the adoption of a resolution of general disapproval of medical practitioners taking office under medical aid societies. As I could not obtain any satisfactory explanation from the members of the committee respecting the formation of the Conciliation Board or the conditions under which the profession was asked to join such a board I spoke against the proposal as being an inchoate one and also because the report of a conference held between Dr. Glover's committee and certain representatives of the friendly societies showed beyond all manner of doubt that the so-called Conciliation Board would not be allowed to take into consideration the important point of wage limit. In fact, the attitude of the friendly societies on the subject of wage limit is actively hostile to the opinion of the medical profession. Under these circumstances, unless the conditions under which such a board is to meet are clearly laid down, I cannot see how its deliberations can be of any service, or how the profession is to elect its delegates, or how the board is to enforce its decisions, or how the expenses of its business are to be met. During the discussion in the Council very serious statements were made by Mr. Bryant and by Dr. Glover which evidently influenced many members of the Council in favour of the Conciliation Board but for which no specific authorisation was forthcoming. I would therefore advise the profession to reserve judgment until it has distinctly before it in print all the necessary conditions for the establishment of such a board. The second part of this matter—namely, the warning addressed to persons accepting office under medical aid societies—ought to have been passed by the Council long ago. Although exception may properly be taken to the wording of the Council's resolution it will naturally constitute the basis of further action on this subject.

VII. *Unqualified practice.*—Considerable progress was made at the recent session in regard to the legislation further inhibiting unqualified practice by persons forming themselves into companies. By the communication of a committee of the Council (the work of which was chiefly carried

out by Mr. Tomes) with the Lord Chancellor full consideration of the needs of the profession in connexion with these specially medical bogus companies was obtained with the final result that the object of the medical and dental professions will be met by the Government introducing the necessary clauses in their Companies Act Amendment Bill. This must be regarded as a favourable advance in this matter.

VIII. *Midwives Bill.*—Regarding the Midwives Bill now before the House of Commons the Council confirmed its former disapproval of that Bill, but as the Bill lost its place nothing more was done in the matter than to communicate definitely to the President of the Privy Council further objections of the Council, and as will be seen from the result of a recent deputation the President of the Privy Council has given the matter his full consideration. The Bill will doubtless come up next session, and care must be taken to prevent its passage in its present pernicious form, since it neither secures safety to the public nor adequate observance of the interests of the profession.

IX. *Entry of higher qualification on the Colonial List of the Registrar.*—A graduate of Calcutta University having applied for the registration of her qualification of the F.R.C.S.I. which she had obtained, this was refused to her by the Executive Committee on the advice of Mr. Muir Mackenzie apparently without having the facts fully placed before him by the solicitor. As soon as I became aware from the minutes of the Executive Committee that this unjust action had been taken I gave notice of the motion that this action and opinion of Mr. Mackenzie were contrary to the terms of the Medical Acts and moved that the application of the graduate in question should be acceded to. After I had moved the resolution in question Mr. Mackenzie admitted that the facts had not been properly before him and stated that the Medical Acts fully admitted of the construction I placed upon them. The report of the debate on this matter, which if it had not been arrested would have seriously affected our colonial colleagues, is only to be found in the pages of the *British Medical Journal*.

X. *Scientific education of students.*—A very important question was raised by the Education Committee on the scientific education of medical students. It arose from the fact that unfortunately the English Conjoint Board—i.e., the College of Surgeons and the College of Physicians—had adopted an attitude of hostility to the provisions of the Council for securing a thorough scientific training to the student, and this attitude was aggravated by the representative of the College of Physicians, who defied the Council. The Council, however, were not intimidated by this disloyal action on the part of the English Conjoint Board and supported the Education Committee.

XI. *Constitution of Penal Cases Committee.*—The number of members of this committee has been increased by the addition of Sir Christopher Nixon, Dr. Bruce, and myself.

XII. *Finance.*—As I pointed out in previous years, the financial arrangements of the Council are in a serious state. If the accounts of the Pharmacopœia are separated as they ought to be (and as at the last session of the Council it was finally determined that they should be) and a true estimate obtained of the finances of the Council it then becomes clear that the income is diminishing while the expenditure is increasing, that the reserves of the various branches are also decreasing, and that the Irish Branch is already bankrupt. The proposal was made by the junior treasurer that money should be lent from the funds of the English Branch to the bankrupt Irish Branch, but this provisional and unsound proposition fortunately met with no support from the Council. The whole trouble of the Irish Branch arises from the fact that the financial system of the Council and its branches is faulty. The necessary expenditure of the branches imposed upon them by the Medical Act of 1858 is by the same Act only to be met by such registration fees as happen to be paid into the account of that particular branch Council, the result being that if as is the case the students educated in Ireland to a considerable extent register themselves in England and Scotland the Irish Branch of the Council is deprived of its proper income. The whole constitution of the Council and its branch Councils and their financial arrangements, therefore, needs immediate revision and this fact alone constitutes a powerful argument for obtaining as quickly as may be an amendment of the Medical Acts. A committee, however, which was proposed by Dr. Glover to consider the amendment of the Medical Acts was refused by the customary clique of obstructionists, headed as usual by Mr. Carter, and in the discussion upon Dr. Glover's motion the same obstructionists suggested that all propositions for a Medical Amendment Bill should come from the outside. This had better be regarded as an invitation to the British Medical Association which has been engaged on this matter for several years, to advance its work and afford the General Medical Council an opportunity to deal with this urgently needed reform.

Summarising the work of the last session of the General Medical Council the profession can be fairly congratulated on the fact that at this last session the majority of the questions raised for discussion not only have been accredited sufficient time for their consideration, but also that the interests of the profession have obtained on the whole nearly as much consideration as the interests of the general public.

Cavendish-square, W., July 31st, 1899. VICTOR HORSLEY.

THE WEST LONDON HOSPITAL AND THE NATIONAL ANTI-VIVISECTION SOCIETY.

THE HON. STEPHEN COLERIDGE, the honorary secretary of the National Anti-Vivisection Society, has made an attempt to divert to the Poplar Hospital for Accidents the funds of the West London Hospital, the condition of the sick and injured among the poor of West London being of no account to him in comparison with the hideous fact that the West London Hospital medical staff comprises two gentlemen holding certain certificates as vivisectors. We have been asked to publish the following correspondence:—

Bute House, Hammersmith, July 12th, 1899.

DEAR MR. HOLLAND,—The *enclosed circular has been addressed to all the supporters of the West London Hospital by Mr. Stephen Coleridge, Hon. Secretary of the National Anti-Vivisection Society.

The Committee of the West London Hospital, by whom the circular has been considered, find it difficult to believe that you, as chairman of the Poplar Hospital, approve of such a method of improving the funds of that institution as is revealed in that circular and before any further consideration of the matter would like to have your assurance that such method meets with your absolute disapproval. You will oblige me if you will be good enough to reply to this note by mid-day on Friday, the 14th instant, so that I may inform the Committee of your views on the subject.—Very faithfully yours,

WILLIAM BIRD,
Chairman of the West London Hospital.

Hon. Sydney Holland.

* The "enclosed circular" above referred to is the one numbered 2a.

[2]

44, Bryanston-square, W., 13th July, 1899.

DEAR MR. BIRD,—I entirely and very strongly disapprove of the circular and of any attempt to harm so excellent and so terribly needed a hospital as the West London, and I am sure you need no letter from me to assure you that Mr. Coleridge's circular letter was written without my knowledge and that I have never before seen it. I should like to tell you how it happens that his society are trying to get funds for the Poplar Hospital. His society made a very violent attack on the London Hospital, of which I am chairman, because we made a grant of £2000 a year to our medical college, a grant necessary for the advantage of the patients, as well as for the advance of the college, without which the hospital could not be properly worked. In the course of a somewhat heated correspondence between myself and Mr. Coleridge he wrote—or one of his supporters wrote, I cannot remember which—that if we would stop all vivisection at the college he could get a large sum of money for the hospital. I replied that I did not believe his supporters would do anything of the sort, and I added that if he was in earnest about this, and if they were only deterred from subscribing by the fact that vivisection took place at the college attached to the London Hospital, why did not he and his supporters help a hospital like the Poplar Hospital, where there was no vivisection because there was no medical school, and where there could be none? His reply was that he and his supporters would help if the Poplar Hospital would give an undertaking to return to his society any funds they obtained through his society in the event of any vivisection ever taking place at that hospital or in the event of any man holding a licence to vivisect being elected on to the staff. This we have consented to do, but we shall have to reconsider this decision if our resolution is to be used to divert subscribers from one hospital to another instead of tapping a new source of people who have never subscribed because they thought that vivisection took place at all hospitals.

I do not understand Mr. Coleridge's position. The policy of his society is not the total abolition of vivisection, but, as declared by the Duke of Portland, the putting it under the effective control of the Home Office. The Duke of Portland is a Vice-President of the society and said at the public meeting organised by the society that he had refused to take any active part for the society till this policy had been adopted. This is a policy with which most people would agree.

But let me add in conclusion that I do not think you need be at all alarmed as to the result of Mr. Coleridge's circulars on your subscribers. He tried to damage the London Hospital just in the same way by

circularising the subscribers and I cannot trace more than about £10 loss and a certain gain of over £300.

Yours very truly,
SYDNEY HOLLAND,
Chairman, Poplar Hospital.

P.S.—You may make any use of this letter you please. I enclose a letter I have sent to Mr. Coleridge.

[2a]

5th July, 1899.

DEAR MADAM,—Mr. William Bird, the chairman of the West London Hospital, recently wrote to the papers assuring those who object to the practice of vivisection that nothing of the kind had ever taken place at the hospital.

This is no doubt an accurate statement because at present there is no laboratory licensed for vivisection attached to this hospital, and to that extent the West London Hospital compares favourably in the eyes of the humane with many other London hospitals.

The National Anti-Vivisection Society, however, would wish you as a subscriber to the West London Hospital to be made aware of the fact that Drs. W. A. Turner and G. L. Cheatle, who are both on the staff of the hospital, are vivisectors holding certificates enabling them to dispense with the obligation to kill their vivisected animals before they recover from such anæsthetics as may be administered to them during the initial operation of opening their bodies with the knife.

Some of the most dreadful experiments recorded in the physiological press are performed with these certificates, the animal being kept disembowelled after the anæsthesia had passed off and tortured for hours with their dissected-out nerves stimulated with electricity.

Many ordinary kind-hearted folk hold the opinion that such practices as these harden the heart and render those who do them insensible to human suffering, and accordingly they prefer to send their hospital subscriptions to such institutions (the Poplar Hospital is one) as undertake not to appoint or retain licensed vivisectors on their staff.

From Mr. Bird's letter it may be presumed that the West London Hospital would not suffer any diminution of its funds if it adopted a position as regards vivisection similar to that observed at the Poplar Hospital.

If, however, licensed vivisectors are retained on the staff of the West London Hospital and should you consequently prefer to subscribe to the Poplar Hospital, you should send your subscriptions to this office to be forwarded to that hospital on the terms of the pledge given by its committee, a copy of which I shall be pleased to send you should you wish to be acquainted with its exact terms.

I am, very faithfully yours,
STEPHEN COLERIDGE, Hon. Secretary.
National Anti-Vivisection Society, 20, Victoria-street, S.W.

[3]

COPY OF LETTER FROM THE HON. SYDNEY HOLLAND TO THE HONORARY SECRETARY OF THE NATIONAL ANTI-VIVISECTION SOCIETY, DATED JULY 13TH, 1899.

DEAR SIR,—I have received a copy of a circular sent out by you as Honorary Secretary of the National Anti-Vivisection Society to the subscribers to the West London Hospital, in which you suggest that subscribers to that hospital should transfer their subscriptions to the Poplar Hospital. I am sure my committee would very much regret that the resolution they came to should be used in this way as an attempt to harm another hospital for the benefit of the Poplar Hospital. We hoped to reach a portion of the public who had hitherto refrained from subscribing under the mistaken belief that vivisection took place at all hospitals, but never contemplated our resolution being used in this way.

I will place the circular before the Poplar Hospital Committee at the earliest opportunity.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6676 births and 5379 deaths were registered during the week ending August 5th. The annual rate of mortality in these towns, which had increased from 15·7 to 20·7 per 1000 in the five preceding weeks, further rose last week to 24·6. In London the rate was 25·2 per 1000, while it averaged 24·2 in the 32 provincial towns. The lowest death-rates in these towns were 12·7 in Croydon, in Derby, and in Gateshead, 13·9 in Blackburn, and 15·5 in Preston and in Halifax; the highest rates were 30·0 in Burnley, 31·5 in Liverpool, 32·6 in Plymouth, and 37·4 in Sheffield. The 5379 deaths in these towns included 1538 which were referred to the principal zymotic diseases, against 798 and 1113 in the two preceding weeks; of these, 1182 resulted from diarrhœa, 128 from measles, 91 from diphtheria, 82 from whooping-cough, 35 from "fever" (principally enteric), and 20 from scarlet fever. The lowest death-rates from these diseases were recorded in Halifax, Wolverhampton, Gateshead, and Derby; and the highest rates in Liverpool, Nottingham, West Ham, and Sheffield. The greatest mortality from measles occurred in Liverpool, Salford, Burnley, and Sheffield; from whooping-cough in Blackburn, Huddersfield, and Leeds; and from diarrhœa in West Ham, Portsmouth, Plymouth, Nottingham, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the 33 large towns. The 91 deaths from diphtheria included 44 in London, nine in Leeds and in Sheffield, and five in West Ham and in Leicester. No fatal case of small-pox was registered last week in any of the 33 large towns, and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on August 5th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 2704, against numbers increasing from 2161 to 2667 at the end of the 11 preceding weeks; 297 new cases were admitted during the week, against 299, 292, and 307 in the three preceding weeks. Influenza was certified as the primary cause of two deaths in London. The deaths referred to diseases of the respiratory organs in London, which had been 149 and 169 in the two preceding weeks, declined again to 159 last week, and were 23 below the corrected average. The causes of 55, or 1·0 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Oldham, Bradford, Leeds, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Blackburn, Huddersfield, Halifax, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16 5 and 17·1 per 1000 in the two preceding weeks, further rose to 18·0 during the week ending August 5th, but was 6·6 per 1000 below the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 12·8 in Greenock and 13·1 in Aberdeen to 18·6 in Edinburgh and 20·5 in Glasgow. The 550 deaths in these towns included 77 which were referred to diarrhœa, nine to whooping-cough, eight to measles, six to "fever," four to scarlet fever, and four to diphtheria. In all, 108 deaths resulted from these principal zymotic diseases, against numbers increasing from 66 to 106 in the four preceding weeks. These 108 deaths were equal to an annual rate of 3·5 per 1000, which was 3·6 below the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had increased from 24 to 63 in the four preceding weeks, further rose last week to 77, of which 38 occurred in Glasgow, 11 in Edinburgh, and 11 in Dundee. The deaths referred to whooping-cough, which had been five and nine in the two preceding weeks, were again nine last week, and included four in Glasgow and two in Dundee. The eight fatal cases of measles showed a marked decline from the numbers in recent weeks, and were all registered in Glasgow. The deaths referred to scarlet fever, which had been eight and six in the two preceding weeks, further fell last week to four, of which three occurred in Glasgow. The fatal cases of "fever," which had been five and eight in the two preceding weeks, declined again to six last week, and were all recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 53, 58, and 64 in the three preceding weeks, declined again last week to 53, and were considerably below the number in the corresponding period of last year. The causes of 29, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·9 and 28·5 per 1000 in the two preceding weeks, further rose to 32·3 during the week ending August 5th. During the past four weeks the death-rate in the city has averaged 27·4 per 1000, the rate during the same period being 20·2 in London and 16·5 in Edinburgh. The 223 deaths registered in Dublin during the week under notice were 32 above the number in the preceding week, and included 65 which were referred to the principal zymotic diseases, against numbers increasing from six to 39 in the six preceding weeks; of these, 40 resulted from diarrhœa, 18 from measles, four from whooping-cough, three from "fever," and not one either from small-pox, scarlet fever, or diphtheria. These 65 deaths were equal to an annual rate of 9·7 per 1000, the zymotic death-rate during the same period being 7·2 in London and 2·1 in Edinburgh. The deaths referred to diarrhœa, which had increased from three to 19 during the four preceding weeks, further rose to 40 last week. The fatal cases of measles showed a further increase upon numbers in recent weeks.

The deaths referred to whooping-cough, which had been two and three in the two preceding weeks, further rose last week to four. The three fatal cases of "fever" exceeded the numbers recorded in any of the three preceding weeks. The 223 deaths in Dublin last week included 68 of infants under one year of age and 38 of persons aged 60 years and upwards; the deaths of infants showed an increase, while those of elderly persons were below the number recorded in the preceding week. Three inquest cases and three deaths from violence were registered; and 67, or nearly a third, of the deaths occurred in public institutions. The causes of 10, or more than 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

SURGEON A. W. B. LIVESAY to the *Duke of Wellington* for disposal.

THE ROYAL ARMY MEDICAL CORPS.

Major A. W. P. Inman is appointed Physician and Surgeon, Royal Hospital, Kilmainham, Dublin. Lieutenant L. E. L. Parker joins at Woolwich. Lieutenant-Colonel Charles E. Dwyer retires on retired pay. The undermentioned Captains to be Majors: George F. Alexander, Charles S. Spong, D.S.O., William B. Leishman, James Thomson, Gerald T. Rawnsley, Charles W. Reilly, Ernest C. Freeman, Alfred P. Blenkinsop, John Paterson, Vesey H. W. Davoren, Alfred Wright, Robert J. Copeland, John Girvin, Anthony J. Luther, Harold S. Peeke, Alfred L. Borradaile, Thomas Birt, and William Hallaran. The undermentioned Lieutenants to be Captains: Edwin T. F. Birrell, Edward W. W. Cochrane, Arthur H. Morris, George B. Riddick, Samuel A. Archer, Alexander J. MacDougall, Robert W. Clements, Maurice Swabey, and Henry Hewetson. The undermentioned Surgeons on probation to be Lieutenants: Francis James Palmer, Guy Harle Irvine, Robert Allan Cunningham, Vincent James Crawford, George Goslett Delap, Oswald Challis, William Arthur Woodside, Harold Simson, Harold Hugh Norman, William Richard Blackwell, Henry Michael Nicholls, Hugh Bernard Onraët, Arthur Chopping, Herbert Frere Hart, Arthur Lisle Ambrose Webb, Sidney George Butler, Littleton Francis Forbes Winslow, John Joseph Witworth Prescott, Percy Hope Faulkner, Henry Edward Manning Douglas, Ernest Edward Ellery, Otto William Alexander Elsner, James William Langstaff, John Ignatius Worgan Morris, Edgar Thomas Inkson, Arthur Atkinson Seeds, Henry Stewart Anderson, Howard Enser, Langford Newman Lloyd, Leonard Wood, Edmund Leonard Munn, Thomas Campbell MacKenzie, Edward Patrick Connolly, and James Henry Robinson Bond.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division, Royal Garrison Artillery): Surgeon-Lieutenant G. A. Troup to be Surgeon-Captain. *Rifle:* 1st Volunteer Battalion the Royal Welsh Fusiliers: Surgeon-Lieutenant J. E. H. Davies to be Surgeon-Captain.

SOUTH WALES VOLUNTEER INFANTRY BRIGADE.

The Brigade Camp which was held at Porthcawl during July comprised some 4500 men. The number of casualties was small and the health of the troops was excellent. The cases dealt with in hospital were few in number.

INDIAN FINANCE.

We are all interested in the condition and prosperity of India and the medical services of that country as much as, and possibly even more than, other people, for we know that public works, sanitary progress, and public health in India all turn upon financial considerations. It speaks well for the statesmanlike ability with which affairs in that country are conducted that Lord George Hamilton in bringing forward the Indian financial statement in the House of Commons was able to announce that the surplus for 1898–99 was the largest yet realised in India since British rule had been established there. Considering that war, plague, pestilence, and famine have prevailed the fact that this should be so is very remarkable. The great increase of population that has taken place is not, however, altogether a subject for congratulation. On the contrary, it must be a source of much anxiety, for the increase is mainly of the poor indigent part of the teeming native population. Lord George Hamilton was fully justified in eulogising Sir James Westland on his quitting office as Financial Minister of the Indian Government for the great ability, courage, and foresight he had exhibited under the most difficult and trying circumstances. It seems to be now certain that the establishment of a gold currency for India will be realised, but this will probably prove beneficial rather than otherwise to members of the medical services. The prevalence of plague and fears as to the failure of the monsoon in certain districts of India are, unhappily, the main sources of anxiety at the present time, for failure of the monsoon means famine.

THE SERVICE EXAMINATION.

The following are the lists of successful candidates for commissions in the Royal Army Medical Corps and Indian Medical Service at the recent examination in London:—

ROYAL ARMY MEDICAL CORPS.

Names.	Marks.	Names.	Marks.
L. W. Harrison	2875	F. Harvey	2102
F. S. Irvine	2284	C. E. Trimble	2086
H. M. Morton	2260	J. Matthews	2084
M. H. Babington	2231	W. M. McLoughton ...	1940
F. G. Richards	2150	E. W. Siberry	1816
E. B. Knox	2121	B. F. Wingate	1805
H. S. Roch	2115	P. S. O'Reilly	1800

INDIAN MEDICAL SERVICE.

Names.	Marks.	Names.	Marks.
A. C. MacGilchrist	3151	M. H. Thornely	2400
C. M. Goodbody	2667	L. P. Stephen	2356
J. W. D. Megaw	2732	C. C. Murison	2335
E. O. Thurston	2619	W. O. S. Murphy	2261
R. Steen	2571	F. V. O. Beit	2172
J. L. MacInnes	2565	H. M. Mackenzie	2139
L. Gilbert	2550	W. C. Long	2085
G. Browse	2542	L. B. Todd	2046
E. A. C. Matthews	2497	M. Corry	1945
T. G. N. Stokes	2415	G. C. Beamish	1943
F. F. Elwes	2410	H. A. Williams	1939

THE TRANSVAAL CRISIS.

It does not look as if things were progressing favourably in South Africa. Mr. Kruger and the Boers are apparently unwilling to accept unconditionally Mr. Chamberlain's proposals for a mixed commission of inquiry into the franchise question; on the contrary, they are apparently arming and making military preparations as if they thought war inevitable. And they will prove to be right if they are determined not to yield to terms and put an end to the present crisis. After what Lord Salisbury has said in his speech in the House of Lords and Mr. Chamberlain's remarks subsequently in the House of Commons, it is certain that matters will not be allowed to drift on indefinitely as they are at present. In the event of war with the Boers a force of between 40,000 and 50,000 British troops will probably be required for the purpose and the undertaking will be a serious one, for the Government of this country will, of course, be compelled not to stop until it is brought to a successful issue. We hope that all our medical arrangements have been made for the contingency. A large number of medical officers and a vast quantity of hospital stores and equipment will be required, and we may assume that medical stores and equipment have already been sent out and that all preparations have been, or are being, made.

ENTERIC FEVER IN THE EUROPEAN ARMY IN INDIA.

Apropos of Lord George Hamilton's recent statement in the House of Commons concerning the large and increasing prevalence of enteric fever in India the *Times* of August 4th published a communication from a correspondent which is in amplification of the remarks of the Secretary of State for India on the subject. Some of the increase of enteric fever in India is, no doubt, an apparent increase rather than a real increase, owing to the fact that enteric fever is a much more commonly recognised disease in India than it was many years ago and also to the fact of there being under present service conditions an increased amount of very susceptible material present in the country. Still, enteric fever prevails in the European army serving there to a very lamentable extent. There is little or nothing with which our readers are not already acquainted in the communication in question. We have frequently called attention to the facts and we have dwelt upon the subject in our notices of the reports of the Sanitary Commissioner with the Government of India.

A REGIMENT STRUCK BY LIGHTNING.

While the 2nd Battalion the Cheshire Regiment was marching on Thursday night last, August 3rd, from Limerick to Thurles for the autumn manœuvres the men were caught in a thunderstorm and several were injured, though not fatally it is hoped.

DEATHS IN THE SERVICES.

Deputy Inspector-General H. Pillean (retired list) at Brighton on July 28th, aged 86 years. He joined the Army in 1836, became Surgeon-Major in 1846, and retired with the honorary rank of Deputy Inspector-General in 1861.

Surgeon-Major Edward D'Arcy Evezard (retired list), I.M.S., Madras Army, at Broadstairs, in his seventieth year. He served in the Madras Army as Civil and Zillah Surgeon and retired in 1872.

Surgeon-General William Godfrey Watt (retired list), A.M.S., at his residence, Sholden Paddocks, near Deal, aged 78 years. He was appointed Assistant-Surgeon in the Army in 1844 and Surgeon in 1854 when he served in the campaign in the Crimea. He was present at the battles of the Alma, Balaclava, and Inkerman, the affairs of Bulganac and M'Kenzie's Farm, and during the siege of Sebastopol. In the winter of 1855–56 he was present at the great explosion of magazines in the French camp, remaining behind to attend the wounded of the British and French armies when the troops were marched to the front to avoid the danger of a second explosion, which was supposed to be imminent (medal with three clasps, 5th Class of the Medjidie, and the Turkish medal). He obtained the rank of Surgeon-General in 1879, and retired in 1880.

Correspondence.

"Audi alteram partem."

UNFOUNDED CHARGES OF PROFESSIONAL MISCONDUCT: AN APPRECIATION OF THE MEDICAL DEFENCE UNION.

To the Editors of THE LANCET.

SIRS,—Will you allow me space in the columns of THE LANCET for a grateful appreciation of the Medical Defence Union? Judging from the comparatively small number of its members I feel sure that the benefit and advantage of membership is not sufficiently realised by the profession generally. My own story will, I hope, lead many to join its ranks. I became a member of the Union five years ago, little thinking that I was likely ever to become involved in litigation; but last year I suddenly found myself the object of the most damaging public charges of professional neglect and incompetency—charges which I should certainly not have been able to deal with adequately on my own slender resources. I sent the facts up to the secretary of the Medical Defence Union and at once received a most careful and exhaustive letter of advice from their solicitor, followed up by eminent counsel's opinion, and further advice of the most thorough and painstaking nature. Nothing could have exceeded the amount of trouble and care bestowed upon my case from the first by the solicitor to the union, Mr. W. E. Hempson, and it would be difficult to exaggerate the comfort which I derived during a very trying period from the sense that my case was in such hands. The Union subsequently took action on my behalf, which has just ended with complete success in the entire vindication of my character by a jury and the award of £150 damages.

During the six months over which the action was pending the whole of the work connected with the case was taken off my hands by the solicitor to the Union without the slightest trouble to myself and I need scarcely have been aware that I was involved in any proceedings at all, but the work was being done nevertheless with an amount of skill and care and unwearied labour which it would be impossible to praise too highly and which could not have been exceeded if I had been the most wealthy and exalted client in the land instead of a humble country medical man. When I think of what the union has done for me in this trying case and of what I should have suffered without its powerful and kindly aid and when I reflect that such advantages are open to every member of our profession at the cost of 10*s.* 6*d.* yearly, it becomes a matter of surprise to me that the membership roll of the Medical Defence Union is not identical with the Medical Register and Directory.

I am, Sirs, yours faithfully,

Bromsgrove, August 5th, 1899. CAMERON KIDD.

MEDICAL MEN AND THEIR GRIEVANCES.

To the Editors of THE LANCET.

SIRS,—I cannot intelligently follow all the demands put forward by the different writers to THE LANCET, but I am sure that all the clamourings about our grievances will not bring them any nearer any remedy until medical men can sink their minor differences with their own neighbours and sit down together to work for their own mutual good. In going about amongst medical men in this county it is most disheartening to find such petty differences keeping medical men apart and not willing to act with their neighbours to obtain increased remuneration for their work. If medical men will not learn the principles of union they may go on clamouring about their grievances until Doomsday. In the fable we are told that the frogs clamoured for a king and they got a stork for their king who swallowed up the frogs; I will leave others to say who corresponds to the stork in our case. I do not believe in a conciliation board to deal with friendly societies—the profession should take a higher stand than this. But I do believe in medical unions being formed in each county and the scale of fees drawn up and demanded (collectively and individually) and not to go, hat in hand, to ask, What will you give us?

I am, Sirs, yours faithfully,

EDWARD JEPSON,
President of the County of Durham Medical Union.

August 1st, 1899.

THE SWANSEA HOSPITAL STAFF AND THE WORKMEN'S COMPENSATION ACT.

To the Editors of THE LANCET.

SIRS,—I have been instructed to send you for your kind publication the subjoined resolutions which were passed unanimously at a meeting of the honorary medical staff of the Swansea General Hospital held this evening.

1. That the medical staff of this hospital do not fill up certificate under the Workmen's Compensation Act for patients treated in the hospital for a fee of less than a guinea.
2. That the house surgeon be requested not to give any certificate under the Workmen's Compensation Act except under the direction of the honorary medical officer in charge of the case.

The medical staff will feel obliged if you will publish these resolutions as the matter is one of much importance to the profession at large.

I am, Sirs, yours faithfully,

A. F. BLAGDON RICHARDS, M.A., M.D. Cantab.,
Honorary Secretary Swansea Hospital Medical Staff.

Swansea, August 2nd, 1899.

"A CHANCE WHICH MAY NOT RECUR."

To the Editors of THE LANCET.

SIRS,—Mr. George Barraclough in THE LANCET of July 8th under the above heading speaks of the Canary Islands as *possible* health resorts for Europeans. May I ask him if he has ever seen "Tenerife and its Six Satellites," by Mrs. Stone (Marcus Ward); "Samler Brown's Guide to Madeira and the Canary Islands" (Sampson Low, Marston, and Co.); Dr. Cleesby Taylor's works on "The Climate of the Canaries" (Churchill); or Dr. Brian Melland's recent pamphlet, "Climatic Treatment in Grand Canary" (Heywood)? Perhaps I may also call attention to a letter by myself in the *British Medical Journal* of July 15th of this year describing the hospital now being erected and to be opened on Dec. 1st next; also "A Guide to Güimar, with Appendix on the Islands" (Heywood), also by

Yours faithfully,

STANFORD HARRIS, M.D. Durh., M.R.C.S. Eng., L.S.A.

Las Palmas, July 26th, 1899.

"'TUBERCULAR' AND 'TUBERCULOUS.'"

To the Editors of THE LANCET.

SIRS,—Surely your correspondent, writing upon the above subject in THE LANCET of August 5th, is wrong. It is only within the past few years that the pathological significance of "tuberculous" has been recognised, and to quote old authors

upon the subject can have no authoritative value inasmuch as the term "tubercular" was the only one used by the earlier clinicians and pathologists in this connexion. Furthermore, why should your correspondent object to the expression "tuberculous disease"? I fail to see that this term is incorrect. "Tuberculous disease" implies a disease caused by the tubercle bacillus, while to speak of "tubercular" disease must mean that whatever a disease may be caused by it assumes a nodular or "tubercular" form. If Dr. Huggard be right then "tubercular" leprosy must be the product of the tubercle bacillus.

I am, Sirs, yours faithfully,

August 8th, 1899. F.R.C.S.

"'CONSCIENTIOUS OBJECTOR' CERTIFICATES."

To the Editors of THE LANCET.

SIRS,—In reply to the letter of "F.R.C.S., J P." which appeared in THE LANCET of July 29th it seems to me that the attitude we as medical magistrates should assume is clear. If the applicant has complied with the law in every particular we must sign the certificate. It is our duty to administer the law as we find it, notwithstanding that we may personally think the Act in question a bad one. If any magistrate feels that he cannot conscientiously do this I think he ought to retire from the bench.

I am, Sirs, yours faithfully,

August 3rd, 1899. M.D., J.P.

SANITATION IN CALCUTTA.

(FROM A CORRESPONDENT.)

III.[1]

THE water-supply of Calcutta is obtained from the following four sources: (1) a filtered supply from the Hugli river, taken some miles above the city; (2) an unfiltered supply from the same river, taken within the city limits; (3) tanks; and (4) wells. Formerly the city was supplied by water taken directly and without filtration from the river and by water from tanks, wells, and aqueducts, the last being open channels which contained and distributed the rain-water. The prevalence of cholera—then, as now, endemic in Calcutta—was intimately connected with these modes of obtaining water. The reduction in the mortality from this disease which followed the introduction into the city of a pure filtered water-supply early in 1870 was so remarkable that the case of Calcutta has become a classic and is referred to in every text-book of public health and in almost every treatise dealing with the subject of cholera and water-supply. The story has, in fact, been so repeatedly told that the briefest recapitulation of the facts will suffice here. Such recapitulation is necessary in order to understand what follows and in order to enforce and strengthen the main contention of the present paper. That contention is, briefly, that while the introduction of a filtered water-supply into Calcutta has been a measure of immense importance in diminishing deaths from cholera in that city it has not by itself succeeded in abolishing the disease altogether, and that in order to gain that end not only must the filtered water-supply be made available for every inhabitant of the city at all hours of the day and night, but other dangerous and easily accessible sources of water-supply (particularly tanks and wells) must be done away with. So long as those polluted sources of water-supply remain and so long as the filtered supply is unavailable for more than two-thirds of the 24 hours, so long will cholera continue to be one of the most fatal diseases to the native inhabitants of Calcutta.

The following, then, are the principal facts in connexion with the reduction of cholera mortality which followed the introduction of a filtered water-supply in 1870. The need for such a supply had been felt quite early in the century, but it did not lead to action until the middle of the century. By an Act passed in 1858 the Municipal Commissioners were enjoined to set aside annually 30,000 rupees for the purpose of paying interest on a sum to be borrowed for carrying out an improved water-supply. The sum was obviously inadequate, representing as it did a capital of only five or six lakhs of rupees, while at that very time there were three schemes for a new water-supply under discussion, the cheapest of which estimated the initial outlay at no less than 14 lakhs. It was in 1859 that Government sanctioned the carrying out of the scheme selected. In the same year the new drainage scheme received sanction and the two works went on simultaneously, the one being, in fact, the necessary corollary of the other. A year or two previously the committee appointed to inquire into the proposed drainage scheme had reported that they considered "a copious and diffused water-supply over the city to be absolutely essential to its efficient drainage." The water-supply scheme progressed more rapidly than that of the drainage, which, indeed, is even now far from completed in the suburban parts of the town. The Calcutta waterworks were formally opened in January, 1870, but there is reason to believe that the water which they distributed was not generally employed by the native population until some months later. Conservatism and caste prejudices and fears prevented the Hindus from taking advantage of the new supply at once. The latter were only removed by a public announcement made by the Brahmin leaders that good Hindus might drink the water thus supplied without fear of injury to their caste provided that they did not employ it in religious ceremonies. By May, 1870, it is believed that the use of the new water-supply had become pretty general if not universal. There was practically an immediate fall in the cholera mortality; but as the annual period of greatest cholera activity in Calcutta is usually in the months of February, March, April, and May, and a fall usually occurs after the last-named month, it is necessary to take the returns for whole years to obtain a just idea of the fall in cholera mortality. The following are the returns for the 11 years 1865–1875:—

Year.	Deaths.	Year.	Deaths.	Year.	Deaths.
1865	5076	1869	3592	1873	1140
1866	6826	1870	1560	1874	1216
1867	2268	1871	790	1875	1668
1868	4178	1872	1068		

While the average mortality from cholera for 30 years had been 3867 per annum previously to the introduction of a pure water-supply, it fell after that to considerably less than one-third of this figure. The collateral facts, which, taken together, leave absolutely no room for doubt that this fall in the mortality from cholera in Calcutta was due to the change in water-supply, are too numerous to mention here, but they may be found set forth in very full detail in many municipal reports, in papers in the *Indian Medical Gazette* and other journals, and also in many of the best-known classical works upon cholera and upon water-supply to towns.

Before proceeding to describe the four sources of water-supply now in use in Calcutta it will be convenient to quote the figures representing the cholera mortality in recent years for the purpose of easy comparison with the figures just quoted. As those figures referred only to urban Calcutta (suburban Calcutta not having been incorporated with the urban municipality until 1888) only the figures in the top line of the following table can be compared with them. The table, however (which is taken from the health officer's report for 1897–98), is quoted in full here in order to show that cholera, though much less prevalent than it was 30 years ago, is still a most prolific cause of death in Calcutta, and that every year from 2000 to 3000—and even over 3000—persons die from this preventable disease.

—	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Urban Calcutta ...	1198	1734	1079	563	1553	1257	596	1118	1302	2377	1543
Suburban Calcutta	—	—	1236	916	1402	762	273	577	797	1072	806
Total Calcutta ...	—	—	2315	1879	2955	2019	869	1695	2099	3449	2349

The occurrence of this large number of deaths is, there are strong grounds for believing, directly dependent upon the incomplete character of the filtered water-supply and upon the presence of, and consequent resort to, polluted sources in tanks and wells.

1. *The filtered water-supply.*—The intake is at Pultah, a short distance from Barrackpore and some 15 miles above

[1] Articles I. and II. were published in THE LANCET of July 22nd and 29th, 1899, respectively.

Calcutta. There are here two pumping stations: the old one which dates from the opening of the waterworks and a new one which is of quite recent construction. The old one has two intake pipes, each two and a half feet in diameter and made of cast-iron, "processed" on the interior. They open in a perforated box, some six or eight yards from the river-bank. The water is pumped into large settling tanks, the bottom of which is laid with bricks. At the proximal end of each of these tanks are three concentric semicircular walls, each a few inches lower than the preceding one. The water flows over these to the main body of the tank; their object is to allow the grosser solids and as much as possible of the suspended mud to settle in these smaller compartments before the water reaches the main tank. The efficacy of the method is said to be doubtful. The water remains in the settling tanks for from 50 to 64 hours, according to the season of the year, a longer period of settling being required during the wet weather, when the river is in flood and contains a much larger quantity of suspended matter, than in the dry season.[3] After settling the water is drawn off to the filter-beds. The filter-beds are made up of two and a half feet of fine sand, under which is a layer of coarse sand, then one of pebbles, and finally one of bricks. The new intake, which is a few hundred yards further up the river than the old one, has one pipe only, but this is four feet in diameter. The new settling tanks are of immense size; they are 2000 feet (or between one-third and one-half of a mile) in length and have a slight slope from one end to the other. The bottoms are not built of brick or any other artificial material, but are simply the natural soil of the neighbourhood. This was tried rather as an experiment and it is said to have been so far justified by the results. Old and new, there are in all 10 settling tanks and 36 filter beds. The latter measure 200 by 100 feet. "In the cold weather the filters last from 17 to 25 days and about a quarter-inch of deposit is taken off the filter and thrown away. In the rains the sand is found blackened for a depth of two or three inches below the surface deposit and this is removed and washed and stored for future use."

The majority of masonry houses in Calcutta used as residences have filtered water connexion. The inhabitants of *kutcha* huts and *bustees* obtain their filtered supply from common standposts erected at intervals in the streets. Standpipes are not as a rule allowed within *bustees*, but if the *bustee* be more than 10 *cottahs* (7200 square feet) in area it may obtain a standpipe, and if both hut and land belong to the same man or the hut be occupied by the owner a *bustee* hut may get connexion; but the latter conditions are rarely fulfilled and most of the inhabitants of *bustees* obtain their water from the nearest street standpipe. The daily supply of filtered water is about 20,000,000 gallons, or over 25 gallons per head of the population. The quality of the water is, to judge from the frequently published analyses, quite satisfactory.

There are two important points in which the water-supply thus briefly described fails to meet the just demands of the people, and as this failure has to be paid for annually by the lives of two or three thousand of the inhabitants no apology is needed for dwelling upon the matter in some little detail. The first and less important point in which the filtered water-supply falls short is in the insufficient pressure under which the water is distributed. At present the water is, with very rare exceptions, unable to reach higher than the second storey of houses. The third and higher storeys are without filtered water-supply. In tenement houses many families live on these upper storeys and they have to be content with water brought in skins (or *mussacks*) by *bheestis* or water-carriers. Water so carried is extremely liable to contamination; and a second evil from the absence of water connexions on these storeys is the absence of flush to latrines and privies, many of which are consequently found to be in a most objectionable and offensive state. It is a matter for extreme regret that at the inception of the water-supply scheme provision was not made for distributing the water at a higher pressure. The difference in cost at the outset would have been inconsiderable, whereas the introduction of an increased pressure now would imply the alteration of ferrules and house fittings and could only be done at a very considerable expense.

The second and more important defect in the present filtered water-supply is its intermittent character. The water is turned on solely between the hours of 5.30 A.M. and 10 A.M. and 3 P.M. and 6 P.M. The filtered supply is therefore available for only seven and a half hours out of the 24 hours, and for the remaining 16½ hours the people are dependent upon what water can be stored in cisterns or water-pots. The poorer classes, particularly those living in *bustees*, suffer most from the intermittent character of the supply. It is extremely rare to find cisterns in the wretched wattle-and-daub huts which constitute *bustees*, and if water is stored at all it is so in earthen water-pots. These pots have to be filled during the hours when the water is turned on at the nearest standpost which is often at a very considerable distance. Consequently the supply of filtered water in the intervals is frequently inadequate. The water in the water-pots is, moreover, exposed to the possibility, amounting almost to certainty, of gross contamination. Anyone who has ever examined a Calcutta *bustee* is aware that the surface soil in them is soaked with filth and sewage; that human excrement and urine are constantly to be seen lying in odd corners and passages between huts; that the spaces between huts are almost invariably littered or heaped with filth and rubbish of all kinds; that blocked and stagnant surface drains are the rule rather than the exception; and that the huts inside are ill-lighted, ill-ventilated (or not lighted or ventilated at all), and overcrowded with native inhabitants who cook, eat, sleep, and smoke in the same room. In or near such a hut the danger of storing water for many hours in open water-pots must be obvious. It can scarcely escape contamination.

But there is an even greater danger in the absence of a constant filtered water-supply and this is the inevitable resort in the intervals to other sources of supply, and particularly to the tanks and wells which will be described later. The water from such sources is foul in the extreme and there is scarcely room for doubt that the continued prevalence of cholera in Calcutta is in great part the direct result of resort to such water. This being so, and cholera being still one of the most fatal of zymotic diseases in the city, it becomes one of the most pressing duties of those who are responsible for the lives and health of its inhabitants to remove these objectionable sources of supply and by making the filtered supply an ample and constant one to do away with all excuse for drinking water from any other source whatever.

The amount of filtered water which is wasted is almost incredible. It is the rule rather than the exception to find taps running to waste in the courtyards of native houses. About one-fourth of the amount of water daily supplied to the town fails to find its way into the sewers and must therefore soak into the ground. The surface soil in the courtyards of most native houses is water-logged and the same is true of the soil around the street standpipes. The municipality has the power to affix meters to house water-pipes and to charge for all water used in excess of a fixed amount and it has also the right to prosecute people wilfully wasting water through carelessness or defective taps and pipes. But these powers are either not exercised at all (as in the case of affixing meters) or are entirely inadequately exercised. The difficulty could only be met by the most energetic and constant exercise of these powers and (a measure of still greater efficacy but of considerably greater difficulty) by educating the people to take a more rational view of the matter. The average native has at present no conception that filtered water is a costly commodity which it is as wrong to waste as any other commodity, or that a water-logged soil in or under his house premises is as unhealthy as it is, to more sensitive organisations, unpleasant. That the amount of waste of water would be increased by making the supply a constant one is obvious. But the difficulty could and should be met by a stringent application of the measures just enumerated.

2. *The unfiltered water-supply.*—This is obtained from the river Hugli at a point near the floating bridge which connects Calcutta with the suburb of Howrah on the west bank of the river. The water is distributed in pipes through a considerable part of the city. It is intended to be used for the following purposes: for watering roads, for flushing connected privies, water-closets, and sewers, and for the supply of ornamental fountains. It is also temporarily laid on to premises where building processes are being

[3] The settling tanks are cleansed once a year, after the rainy season. The cleansing is done by the aid of long and heavy metal planks which are drawn backwards and forwards by 30 or 40 coolies, a small quantity of water being admitted to wash away the mud. The mud thus cleared is a foot or more in depth.

carried on. The last is the only occasion upon which taps are allowed upon an unfiltered water-pipe. The quality of the unfiltered water from the Hugli is extremely bad. It contains a large quantity of suspended matter even at Pultah which is 15 miles above the city. At the point where the unfiltered supply is taken the water must contain the grossest contaminations; a dense mass of shipping and of native craft of all kinds always lies near this spot; the principal bathing *ghâts* are in the immediate neighbourhood, and the burning *ghâts* are on the banks of the river about a mile above the spot. The analyses of the water taken at Pultah, which are made monthly, and the results of which are published in the health officer's reports, show that at certain times of the year the unfiltered Hugli water not only contains an excessively high proportion of "total solids" and of "albuminoid ammonia," but that it also at times contains the cholera bacillus. If this is so at a point 15 miles above the city it is easy to imagine the condition of the water taken from a point within the city such as that just described.

The danger of distributing a water of this character, even solely for the purposes above enumerated, is obvious, and it has been rightly recognised to the extent of forbidding all taps upon the pipes distributing it except, as already stated, when the water is required for building purposes. Until recently this unfiltered water was also supplied to bathing platforms, but this has been wisely discontinued and filtered water substituted. The city being already committed to the principle of a dual supply—that is to say, a supply of filtered and one of unfiltered water—it is of little use to discuss the wisdom or unwisdom of the scheme. What is most urgently required is that whichever of the two systems is to be used for the supply of connected privies, latrines, and water-closets it should be so extended that every house may be connected with the sewers and the system of dry removal of excreta, now largely practised with truly appalling results, may be done away with altogether. In the greater number of houses provided with connected privies, &c., the unfiltered supply is employed for these conveniences; in a few houses the filtered supply is so used. There are many streets and lanes to which the unfiltered supply has not as yet been extended and there are many houses even in streets to which it has been extended which are not yet connected with it. So long as a single house remains unconnected the foul dry or *mehter*-served privy, to be described later, with the horrible and disease-engendering conditions to which it gives rise, must remain in use.

Like the filtered water-supply the unfiltered water-supply is at present intermittent. It is turned on daily from 5 A.M. to 11.30 A.M. and from 1 P.M. to 6 P.M., or for rather less than half of the 24 hours. During the remainder of the day all connected privies and latrines are without flush excepting in a few rare instances where the house possesses a cistern; the consequence is that most of these conveniences are for long periods together in a foul and offensive state, water-traps easily become unsealed, and sewer-gas escapes freely into the interior of houses. Even an approximately sanitary condition will never be attained so long as houses connected with sewers are not provided with a constant water-supply.

3. *Tanks.*—The employment of water from tanks is almost universal throughout India. In Calcutta their construction in the past served a double purpose. It enabled the inhabitants to raise the ground on which they built their houses by the material excavated from the tank and it provided them with a bathing-place, a source of water for drinking and domestic purposes, and a convenient receptable for waste water and for solid and liquid refuse of all kinds—a water-source, a drain, and a midden-heap in one. The results of using one and the same tank for such varied purposes may be imagined and the condition of the water in Indian tanks has been vividly painted over and over again by many writers. The introduction of water from other sources into the city of Calcutta has done away with the last excuse for retaining tanks and they are now slowly disappearing. They are filled up as opportunity arises and comparatively few remain in the central parts of the city. In the suburbs they are still common and are still a fruitful cause of cholera, of malaria, and probably of typhoid fever and other water- or insect-borne diseases. The establishment—if it admits of establishment—of the mosquito-borne theory of malaria may give a much-needed stimulus to the process of abolishing tanks. But tanks are an institution of immemorial usage, they are dear to the hearts of the people, and a wealthy native still regards the construction of a tank as the most public-spirited and beneficent object to which he can devote his money. Their total abolition, even in Calcutta, must be a matter of many years; but so long as they remain, so long must cholera, typhoid fever, and the like continue to claim their annual tale of victims.

4. *Wells.*—There are large areas of the native city of Calcutta where it is almost the exception to find a house which is not provided with a well in some part of the premises. The great majority, if not all, of these wells are shallow wells, not more than from 12 feet to 20 feet in depth. The lining is frequently in a crumbling state and quite incapable of preventing surface water from soaking into the well. The well is rarely covered and the coping around it is usually only a few inches in height. Such wells are found in the small close courtyards of native houses or huts, with the ground around littered with filth and refuse, with an unconnected privy or a urinal within a few feet of the mouth of the well, and with a surface drain running in contact with the coping. In every such well the water is little better than slightly diluted sewage. At its best, when the well is in a large open courtyard, fairly well constructed, and not in the immediate neighbourhood of privies, urinals, and drains, a shallow well in the midst of a city like Calcutta cannot be anything else than a most dangerous source of water. Water from wells is constantly employed for domestic purposes and in very many instances it is admittedly drunk in the intervals when the filtered water-supply is turned off. A native inhabitant will often deny that the water from a well is drunk (a denial which cannot be accepted without reserve in most instances) but will admit that it is used for washing utensils employed for cooking, drinking, and feeding. In one instance of a peculiarly foul well into the use of which the writer was making inquiries it was freely admitted that not only was the water frequently drunk but that it was much liked as a particularly "sweet" water.

It has been shown in the successive reports of the health officer of Calcutta that the water from these wells frequently contains the cholera bacillus. It can scarcely be questioned that the continued prevalence of cholera in the city is closely connected with the continued resort to water from such contaminated sources as wells and tanks. To do away with cholera in the city it has not been sufficient to provide a good filtered supply for a small portion of the day. Even that partial and imperfect measure has, it is true, reduced the cholera mortality to a third of what it used to be, but that is not enough. Calcutta has failed to learn the lesson which that truly striking and splendid result points to. In the late "sixties" and early "seventies," when Calcutta was building her waterworks, she was inaugurating, perhaps unconsciously, a great scientific experiment and one which no other city in the world was in quite the same position to carry out. The city had long been known to be the home of cholera; cholera was known to be a water-borne disease. A new and pure water-supply was given to the city for one-third of the 24 hours and immediately the deaths from cholera fell to one-third of their former number. Is not the inference obvious? Few among the many difficult problems connected with public health have ever had their solution indicated in a manner so closely approaching mathematical demonstration. If the provision of a pure water-supply for so short a time in the day could diminish cholera to such an extent, it can scarcely admit of denial that the provision of a constant supply, and as a corollary the complete abolition of impure sources of supply such as tanks and wells, would practically extirpate the disease altogether. It would completely extirpate it so far as its prevalence is dependent upon the diffusion of the cholera virus through drinking-water obtained from these sources.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Government Sanction for Inoculation against Enteric Fever.—Progress of Vaccination in India.—Objection to the Compulsory Isolation of Lepers.—Re-development of the Plague Epidemic.

FORMAL intimation has been conveyed to the medical authorities to the effect that the Government of India has sanctioned the resumption of voluntary inoculation at the public expense against enteric fever.

Vaccination against small-pox continues to progress. In

the Bombay Presidency the results attained have been remarkably good. During the five years ending in 1897 the percentage of births successfully vaccinated was never lower than 55, and one year it rose to 59. In Bengal, on the other hand, the percentage is only 18. The average number annually vaccinated by each officer is only 650 in Bengal, as against an average of 1690 by the Bombay operators. In Bengal the cost to the Government in only about one anna for each case, whereas in Bombay it is over six annas.

With reference to the important public statement recently made in England concerning the control of lepers the following expression of opinion from a native paper is particularly noteworthy: "We see," writes the *Hindu*, "that attempts are being made in London to create an impression in the minds of the Government in England and the British public that lepers in well-to-do high-class Hindoo families in India are shunned and ill-treated and that if the rule of compulsory segregation of lepers of all classes and not vagrant lepers merely were introduced there would not only be no opposition offered to it but, on the contrary, it would be welcomed. ..... We need hardly mention that any attempt at compulsory segregation of lepers of well-to-do Hindoo families will be as vigorously opposed as the segregation of plague patients was."

Cases of jigger continue to be imported into Bombay by ships coming from Zanzibar. Six more cases arrived on July 16th by the steamer *Sagari*. The patients were removed to hospital.

The plague returns show a yet further large increase in mortality due to more deaths in the Bombay Presidency. Poona City had 253 deaths and the numbers seem still mounting up. The total plague deaths in the whole of India during the week amounted to 1485, against 1144 in the previous seven days. In Bombay City the plague continues at a low ebb, 66 deaths being recorded for last week, and there do not seem to be any signs of sinking below this average. The irony of fate is well exemplified by the present outbreak at Poona. Attacked early in 1897, and very severely, it had not time to recover itself before a recrudescence occurred of a still more severe nature at the end of the year. Succeeding this it had a long spell of immunity which led a well-known official to write as follows in the medical press: "That Poona has remained practically free of plague is due to rigid maintenance of better conditions in the city, careful notification of sporadic cases, and certified deaths." Before his article actually appeared plague was showing signs of development and now the disease is raging in Poona as badly, compared with the difference in population, as it has ever done in Bombay. Most practical men admit that it is impossible under present conditions to keep plague out of any Indian city.

Three more soldiers have been bitten by a rabid dog and have had to be sent to the Pasteur Institute for treatment.

July 20th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary Site.

THE negotiations between the Manchester Corporation and the Infirmary Board have advanced to the stage of definite proposals on the part of the committee appointed by the corporation which have been approved by the board. These proposals, however, have still to be submitted to the City Council and to the infirmary trustees for their sanction before anything further can be done. Briefly they are as follows: (1) that the Manchester Corporation pay in cash the sum of £250,000; (2) that a further sum of £100,000 be paid as follows: (*a*) collected by the corporation from the public, £50,000; (*b*) to be paid by the corporation in 20 annual sums of £2,500—£50,000: total £350,000. In addition to this the corporation proposals contain the following alternatives: (*a*) an area of 5000 square yards within a quarter of a mile of the infirmary (with the necessary buildings) at a cost not exceeding £50,000; or (*b*) 3000 square yards of the present site on which to build a receiving house for accidents and out-patients. Of these alternatives the board adopted the latter. A resolution of the board makes it a condition that the corporation is to reserve this area of 3000 square yards "facing Piccadilly" upon the condition that not more than 7216 square yards of the infirmary site altogether be covered with buildings. "The site of such area of 3000 yards thus reserved to be hereafter mutually agreed upon." This condition assumes that the corporation will build on some portion of the site, and as the present infirmary buildings cover some 7200 square yards it guards the present open space from being lessened in extent. If the board retains the 3000 square yards of the Piccadilly site it foregoes the 5000 square yards within a quarter of a mile and the out-patient department to be erected thereon at a cost to the corporation of £50,000. Had this alternative been adopted the infirmary would have received £400,000. Possibly considerations termed "sentimental" may have led to the adoption by the board of the second alternative. They may have felt that some portion of a site so long dedicated to the service of charity should still be retained for the same purpose. It cannot be said that a receiving-house and out-patient department on a site within a quarter of a mile of the present building could not be built quite as accessible and more conveniently arranged than the present one, and, indeed, one very eligible site has already been suggested in one of the local papers. The prevalent idea is that the corporation wants the infirmary site for the erection of an art gallery and free library round which an open space may be preserved. But if this area is cut into by the 3000 square yards to be reserved for an out-patient department and no more than 7216 square yards are to be built on, the remaining 4200 will be so cramped as to be spoiled and insufficient as a site for a building such as Manchester would wish to see devoted to art and literature. Nor would the two buildings be suitable neighbours, for it would not be the best use of the money to build an out-patient department rivalling the art gallery, nor would it please the æsthetes of Manchester if the latter were to be mistaken for a hospital. It is to be regretted that the board has adopted the second and not the first alternative and has not agreed to give up the whole of the infirmary area. It would be far better to leave it—a noble site for a noble building—than to spoil it for all time by this neither-one-thing-nor-the-other sort of policy.

Condition of the Irwell.

It is stated on the authority of Sir Henry Roscoe that the Mersey and Irwell Joint Rivers Committee is doing good work and that the condition of the rivers is improving. But the recent hot weather has brought out in full force all the odours—or stinks, if the refinement of the present day will permit the use of plain Anglo-Saxon—that the much-abused Irwell can evolve from its depths of liquid filth. The *Manchester Guardian* suggests that the committee should go by steamer from the cathedral to the docks. "Let them look at the water and listen to it," that they may see the putrid masses of filth rise to the surface and hear the bubbles of foul gas burst, "and let them remain for a minute or two on the lee side of a dredger at work, and then they will understand why people have almost forgotten their existence, and why everybody who has to live or work near the lower Irwell or the Manchester docks agrees that the present state of things constitutes a crying scandal." It says truly that "the positive state of the Irwell to-day is absolutely abominable," and yet it is with the greatest difficulty that those who cause the nuisance can be brought to cease their pollution, while there is much wailing about interference with trade and manufacture. Perhaps the country would get on quite as well as it does now if there were a little less trade but purer streams and sweeter air. And it generally happens that what to-day threatens the ruin of a trade leads to-morrow to the utilisation of some waste product by which the much-sorrowing manufacturer is more than recouped.

"*Laudanum Lily.*"

An inquest was held on August 2nd by the deputy coroner upon the body of Lily Haslam, aged 30 years, who died at the Manchester Royal Infirmary on July 31st. The evidence showed that she had been taking laudanum for five years and was known in the district where she lived as "Laudanum Lily." She appears to have taken daily doses of laudanum for the whole period. The officer who had charge of the case said that the chemist knew her bottle which held one and a half ounces "at sight," and the jury laughed. Sometimes it was filled twice a day. "Apparently," said the deputy coroner, "as much as would kill coroner, jury, and all." So the jury laughed again, for judicial jokes,

whatever their quality, are immensely taking. No information was given as to the origin of this fatal habit, nor from what suffering, physical or mental, she sought relief when only 25 years old, in the solace which, according to the verdict, led to her "death from misadventure (opium poisoning)" at the age of 30 years.

August 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Health of Glasgow.

THE first annual report just issued by Dr. A. K. Chalmers as medical officer of the city will no doubt be closely scanned. The citizens have for so many years been accustomed to the lucid presentation of facts and figures and to the suggestive comments which marked the reports of Dr. J. B. Russell that they will turn with a not unnatural anxiety to the first authoritative statement of Dr. Russell's successor. It is only fair to state that Dr. Chalmers has come well through his trial. The report is characterised by clearness and precision and contains several practical suggestions which if they are adopted may be expected to promote the health of the city. It is satisfactory to read that the death-rate for the year, 20 3 per 1000, is lower than the average annual rate for the preceding five years. The influence which local hygienic conditions exert in determining the incidence of mortality is strikingly illustrated by a comparison of the death-rates in different parts of the city. In the Kelvinside districts the rate for the year was only 6 47, whilst at the other end of the scale is Cowcaddens where a death-rate of 32·06 is recorded. In the section dealing with infectious diseases Dr. Chalmers points out that the deaths from enteric fever and diseases of the diarrhœal class show a decided increase when 1898 is compared with the earlier years of the decade. Of enteric fever 1212 cases were registered during the year with a case mortality of 18·3 per cent. Certain groups of the cases of enteric fever could be traced to faulty sewerage, others to single cases the nature of which had only been appreciated when an epidemic outbreak had occurred, and one group was associated with a contaminated milk-supply. The total number of cases so traced, however, is far below the actual increase and therefore the rest "fall to be regarded as an exaggeration of the chronic prevalence of the disease resulting from local conditions which the exceptional climatic conditions present in the autumn months rendered peculiarly active." In this connexion Dr. Chalmers directs attention to the increase in the number of deaths from diarrhœal diseases and shows that this increase is contributed almost wholly by the deaths of children under five years. As it is generally recognised that local uncleanliness in the neighbourhood of dwellings is a circumstance that tends to produce the chronic prevalence of diarrhœa and that the same circumstance also fosters the prevalence of enteric fever the increase in the death-rate both from enteric fever and diarrhœa is most suggestive. It seems to imply that some cause leading to pollution of the atmosphere and fouling of the surface near dwelling-houses has escaped observation. This matter is strongly pressed upon the attention of the Health Committee and suggestions are offered for more efficient supervision of water-closets which are used in common by several tenants and the misuse of which, it is found, frequently leads to the fouling of stairs and landings and to the choking of drains. In the section dealing with tuberculous diseases it is of interest to note that in 501 of the cases of phthisis occurring during the year disinfection was carried out by the sanitary officials. The whole report forms a valuable contribution to social and statistical science.

University of Glasgow.

The resignation of Mr. James Colquhoun, LL.D., as a member of the University Court has received a highly dramatic interpretation. Immediately after the announcement it was intimated that Mr. Colquhoun had been conveyed to Gartnavel Lunatic Asylum on an emergency certificate. Subsequently the two medical certificates necessary for a prolonged detention were presented to the sheriff who, however, refused to act upon them. Mr. Colquhoun was therefore discharged from the asylum, but was immediately arrested by the police and charged with the embezzlement of several large sums of money. It is rumoured that these charges will be considerably increased in number. The accused has been brought before the sheriff and remanded for further inquiries; at present he is a prisoner in Duke-street prison.

August 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

"Nordrach" Treatment for Tuberculosis in Ireland.

THE first sanatorium for the Nordrach method of treating tuberculosis established in Ireland was recently formally opened at Rossclare. The building is not large but it contains ample accommodation for about 20 patients. It is situated about seven miles from the town of Enniskillen on a hill commanding the view over the shores of Lough Erne and therefore of some of the loveliest scenery in Ireland. Mr. W. R. Cooney, who has founded the institution, states that it will be run on economical lines and not for purposes of profit, being intended for consumptive people who can pay their expenses and no more. Mr. Cooney entertained the medical men and clergymen with many other residents of the neighbourhood on July 31st and took that opportunity of explaining the nature of his philanthropic project. The institution seems to have been well launched and on a sensible and popular basis. The matron is an English lady, the resident medical man (Dr. Macfie) hails from Scotland, and the consulting physician (Dr. Kidd) is an Irishman.

Tobacco and Whisky in the Belfast Union Infirmary.

At a meeting of the Belfast Board of Guardians on August 1st Dr. J. Stewart (a guardian) called attention to the quantity of tobacco smoked in the house by the inmates. Three months ago it was 23 lb. per week and now it was 48 lb. per week. In the gaol (of which he was medical officer) they could do without such things, but in the workhouse they could spend £1363 on stimulants, and what was the amount spent on tobacco he could not say, but 48 lb. per week seemed to be too much. With reference to stimulants the Infirmary Committee reported that too many patients were getting stimulants and that some patients were getting too much; that many persons admitted to the infirmary suffering from chronic and incurable diseases while deserving skilled medical and nursing care were not entitled to stimulants as part of their treatment, for the Poor-law never intended chronic invalid paupers to be supplied with stimulants at the public expense; and that the guardians would fulfil their obligations towards such patients by supplying the usual infirmary treatment without them. They therefore recommended that the number of patients now receiving stimulants should be reduced; that unless in exceptional cases the daily allowance should be reduced from four to two ounces; that in future fewer chronic cases should be put on the list for stimulants; and in order that these recommendations should be carried out they suggest a conference with the medical officers. The consideration of this report was adjourned for two weeks.

The Payment of Medical Locum-Tenents.

As I reported in THE LANCET of August 5th the Belfast Guardians have interpreted the rule of the Local Government Board allowing dispensary medical officers a holiday not exceeding a month as giving them the discretionary power of shortening this period, and they propose to pay a locum-tenent only for a fortnight The Local Government Board have written to the guardians that they have no discretionary power in the matter and as a result the guardians on August 1st passed a resolution that as they believed they had under Rule 28 a discretionary power as to the duration of the medical officer's holiday they adhered to their previous resolution on the matter.

Alleged Irregularities in Armagh Workhouse.

The Armagh Board of Guardians at their meeting on August 1st again decided not to read the letter from the Local Government Board giving their decision in reference to their inquiry as to alleged irregularities in the Armagh Workhouse unless the Local Government Board furnished them with copies of all the correspondence that they have had on the subject.

Queen's College, Belfast.

At the class examinations recently held at the above

college the following prizes were awarded:—Botany: Senior, Albert Lytle Black and James Herbert Moore; Junior, Thomas Lyle, Samuel Kirkpatrick Adams, Ernest Marcus Henry Milligan, and Joseph Clarke M'Pherson. Practical Chemistry: Senior, Thomas Killen; Junior, Sydney Herbert George Blakely and Frederick Charles Smyth. Medical Jurisprudence: David M'Mordie, B.A., and William Nicholson (equal), and Archibald George Heron, B.A. Systematic Pathology: Archibald George Heron, B.A., John Campbell Rankin, John Hope Reford, B.A., and David M'Mordie, B.A. Practical Pharmacy: Hugh Moreland M'Crea and Alfred William Hamilton (equal), and William Henry Bright.

Rainfall in July.

In July there were in Belfast 16 days on which rain fell, the total amount being 2·88 inches. It is curious that while it has been so hot and dry in England in the north of Ireland, on the contrary, the rainfall is more this July than in the same month of 1898, for last year it was only 0·74 inch and there were only nine wet days in that month. The rainfall for this year so far has been 23·18 inches, while the total for the same period last year was 19·67. The average for the previous 24 years is 21·39 inches.

The Belfast Hospital for Sick Children.

At a special meeting of the board of management, held on August 3rd, Dr. Howard Sinclair having resigned was appointed consulting physician and Dr. S. Brice Smyth was elected physician in his place. To the post of assistant physician thus rendered vacant Dr. Robert Leathem was elected.

August 9th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Medical Congress at Lille.

THE fifth French Congress of Internal Medicine was opened at Lille on Friday, July 28th, under the presidency of Professor Grasset of Montpellier. The meetings were held in the Palais Rameau and commenced at 10 A.M. At 2 P.M. Dr. Huchard and Professor Renaut of Lyons read their report on Myocarditis. In the evening a reception was given at the palace by the honorary committee of the Congress. On Saturday afternoon Professor Denys of Louvain and Professor Sabrazès of Bordeaux read their report on the second question—viz., Glandular Disease and Leukæmia. In the evening there was a subscription banquet at the palace. Sunday was spent in a very interesting excursion to the sulphuretted mud baths of St. Amand, several kilometres from Lille—baths which are much resorted to by patients from the north of France and from Belgium. In the evening there was an entertainment provided by the municipality at the Conservatoire de Musique. On Monday the members of the Congress visited the hospitals of Lille and the Institut Pasteur, the latter of which has been recently opened and is presided over by M. Calmette; visits were also paid to the State Faculty of Medicine and to the Catholic Faculty, the latter being the only independent faculty of medicine in France. In the afternoon there was a discussion on the third question submitted to the Congress—namely, the Tolerance of Medicines induced by Habit. The whole of Tuesday was spent in listening to different communications and in bringing the proceedings to a close. In the evening a brilliant reception was given by the President of the Congress. Wednesday, August 2nd, was devoted to excursions to the mines of Lens, to Dunkirk, and to the sanatorium at St. Pol-sur-Mer. The excellence of the arrangements did great credit to the business capacity of the general secretary, Professor Combemale, and several innovations made by him might be advantageously imitated by the organisers of future congresses. Two dark rooms were provided for the use of members requiring to take photographs or to develop them. Moreover, contrary to the usual practice, the reporters instead of wasting the time of the meetings by the reading of lengthy reports had them printed beforehand and distributed, reserving their own remarks for the end of the meeting when all the members had spoken. The Congress has decided to hold its next meeting at Toulouse in 1901, for though the meetings should be held annually none will take place in 1900 owing to the great International Congress at Paris taking its place. At Toulouse, the President will be Professor Lemoine of Lille; the Vice-Presidents, Professor Mossé and Professor Caubet of Toulouse; and the secretary, Dr. St. Ange of Toulouse. The subjects appointed for discussion are:—(1) Convulsions in Children; (2) Hepatic Inadequacy (Insuffisance Hepatique); and (3) Drugs which Prevent Tissue Waste (Médicaments d'Épargne). The Congress has unanimously passed a resolution that the various international medical congresses which will meet in Paris in 1900 shall be invited to organise an excursion to Lille to see the magnificent Pasteur Institute in that town.

Treatment of Sea-sickness.

Professor Raphael Dubois has described to the Société de Biologie some experiments, not very numerous but nevertheless interesting, which he has made on the pathology and perhaps the treatment of this imperfectly understood though much investigated complaint. He began by remarking that most of the symptoms of sea-sickness were the same as those observed when the supply of air to the lungs was abnormal in some way or other, the spasms of the diaphragm being probably the proximate cause in this particular instance. These symptoms of derangement of the respiratory acts are found in the occupants of close rooms, in asphyxia by poisonous or irrespirable gases, in mountain sickness, &c. Professor Dubois believes that there is undue retention of residual air in the interior of the lung and consequently a serious interference with the normal respiratory processes. He was on these grounds led to the conclusion that the respiratory insufficiency might be remedied by inhalations of oxygen. At first the results were not very good, because he had only gas-bags of new caoutchouc which had a very bad smell. His experiments, which date back to some 12 years ago, therefore remained unpublished, but he has lately repeated them, using very pure oxygen prepared from atmospheric air and contained in iron bottles provided with stopcocks. In three cases in which he had the opportunity of giving oxygen to seasick persons the sufferers experienced an immediate feeling of comfort, with disappearance of the paleness, giddiness, and nausea. Unfortunately the relief was of short duration, but there is no reason why the inhalations should not be repeated as long and as often as may be necessary. In conclusion Professor Raphael Dubois declared that he by no means claimed to have discovered an infallible and perfect remedy for sea-sickness, but he thought that these interesting experiments might suggest to other investigators the repetition of them on a larger scale.

The Feeding of Hand-reared Infants.

At the meeting of the Academy of Medicine which was held on July 25th Professor Budin described the excellent results which were obtained by his system of giving advice to foster-parents respecting the infants under their care. With this object he holds weekly consultations at a lying-in hospital (the Clinique Tarnier), thereby accomplishing a work which is one of the finest examples of medical philanthropy, thoughtfully designed and efficiently carried out. These consultations serve the purpose of a school for training mothers in the principles of infant feeding. Cow's milk in small bottles sterilised in a water bath is distributed at them in accordance with the requirements of the infants. Every infant has a card on which at each weekly consultation the medical man enters its weight and the quantity of sterilised milk which it is to take daily. From 1892 to June, 1899, M. Budin has been able to trace 435 infants of whom only 32—i.e., 7 per cent.—have died. In 1898, from August 7th to Sept. 3rd, during which time owing to the temperature the mortality of hand-reared infants in Paris was enormous, there was no mortality among the infants who attended the Clinique Tarnier—a result which Professor Budin attributes to the systematic employment of sterilised milk. This milk costs him 35 centimes the litre (2*d.* a pint). Consultations of the same kind on Professor Budin's system have been very recently instituted at other places, as, for instance, at the Hôpital de la Charité, in the department now superintended by M. Maygrier and formerly superintended by Professor Budin before his appointment as professor at the Clinique Tarnier. The results obtained there are very good. M. Variot has introduced consultations of the same kind at the Belleville Dispensary. Similar consultations are also being instituted in the provinces. At Fécamp in particular the results obtained under the management of Dr. Dufour have been quite remarkable, the mortality of the infants having fallen to 1 per cent.

August 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Crusade against Tuberculosis: a Princely Present.

THE Duchess Ravaschieri has crowned her many claims on professional and public gratitude by presenting the Neapolitan Santa Casa degli Incurabili with her fine Villa Filangieri at Pozzuoli as a sanatorium for tuberculous subjects. In a beautiful letter to Dr. Antonio Cardarelli, second Professor of Clinical Medicine in the University of Naples, she indicates the advantages which the villa possesses for the purpose to which she devotes it. Standing on the Colle Madonnella, whence it commands the blue waters of Baiae, surrounded by rich and healthy vegetation and backed by the Solfatara which not only shelters it from northerly winds but also tempers the air with mild sulphurous vapours so beneficial to the phthisical, the villa internally could not have been better fitted for a sanatorium had it been specially built with that object. Naples, indeed, deserved such a token of the Duchess Ravaschieri's consideration. Its committee for the prevention of tuberculosis, headed by the Senator Dr. Enrico De Renzi (Primary Professor of Clinical Medicine in the same school with Dr. Cardarelli) includes 2000 associates and has already amassed large sums for the establishment of sanatoria. In the spring of 1900 it will hold a Congress against Tuberculosis and concurrently will organise a fully equipped Esposizione Igienica e Ginnastica in that connexion to remain open till the following October. In an address delivered to the committee on July 27th, the Senator De Renzi demonstrated that tuberculosis cost Italy two million lives in 30 years, and last year alone (1898) carried off 50,000 persons.

Appalling Number of Deaths by Lightning.

The summer of 1899 will be historical for its tale of victims to lightning-stroke. The unusually violent thunderstorms that have succeeded each other at short intervals especially in the Alta Italia have caused more deaths than in any two years during the last thirty. Take the following as hardly an exceptional instance. A tremendous "nubifragio" (waterspout) burst last week over the commune of Bussero in Lombardy, accompanied with deafening thunder-peals. Fifteen peasants had taken shelter from it under a balcony when a lightning-flash, after striking a copper-lid that covered a neighbouring draw-well, ran along the wall of the building of which the balcony formed a part, and killed instantaneously three boys of one family and two of another, besides injuring severely six others of the original group of fifteen. Other cases of death equally instantaneous though fewer collectively have been reported from other parts of Italy almost daily, the uniform feature in all being this—that the lightning struck those under shelter (usually under a tree) while sparing those who braved out the tempest in the open. The storm-cloud from which the electric fluid is let loose is almost invariably charged with hailstones and it is now being seriously questioned whether the bombardment of such clouds, hitherto successful in protecting vineyards and olive plantations, might not also lessen the danger from lightning-stroke. A Congresso per gli Spari contro la Grandine (congress for dispersing hailstones by artillery) is shortly to meet at Casale Monferrato and a large number of medical men, engineers, agriculturists, and meteorologists have announced their intention to read papers and take part in the discussions, among which the question above indicated is down for consideration.

The Great Heat.

I am writing "in die S. Mariae ad Nives" (the Feast of Our Lady of Snow)—a cult of which the "fervour" contrasts strangely with its object. Those who can, prefer to worship her, not in the Borghese Chapel of the S. Maria Maggiore, but on Swiss ice-fields or snow-mountains "pinnacled dim in the intense inane." Rome is deserted by all but the "Prisoner in the Vatican" and his immediate retinue, even his body physician having left him—for the first time during many years—to woo the sea nymphs and their companion zephyrs on the Latin Shore. And not Porto d'Anzio only but all the other bathing resorts on the Mediterranean and Adriatic coast-line are at present thronged—thronged with holiday-makers and health-seekers of every social grade, including the poor school-children from the cities. By a beneficent charity, owing its inception to a Tuscan medical man (in Italy nearly all sound philanthropy comes from practitioners of the healing art) relays of these little sufferers are transported from the great populous centres every summer to the seaside to lay in a stock of vitality which sustains them for the rest of the year. For instance, Milan keeps up a "Cura Balnearia Marina" at Sestri Levante, on the seaboard between Genoa and Spezia, the director of which, the Cavaliere Dr. Bò, with a band of "infermieri" (hospital attendants) from the Ospedale Maggiore, starts at intervals of a few weeks with a convoy of 230 "bambini scrofulosi" and after a stated period of sea-bathing and outdoor exercise with appropriate diet brings them back to Milan to set out again with another relay of 230, who in turn are succeeded by a like number till every "bambino scrofuloso" of the Lombard capital has "suffered a sea change." This year, with its exceptionally high summer heat, the charity in question was never more popular as the compulsory town frequenter can well understand. The demand for ice, natural and artificial, in all the great cities is as universal as it is increasing, beginning with the flesh and fish markets and descending through the "salsamentari" (sausage-dealers), and "liquoristi" (liquor-sellers) to the humblest dispenser of lemonade or vendor of water-melons. Two years ago, as narrated in THE LANCET,[1] Florence was the scene of an ice famine which led to something like a public riot, which was only quelled by the precipitate importation of the commodity from Mont Cénis at 5 fr. a kilo, about four times its normal price. In the day now passing there is an agitation at Turin, headed by 250 butchers and sausage-mongers, panic-stricken at their wares "going" in the wrong direction for the want of ice, and clamouring for the production of "ghiaccio artificiale" promised but, like other undertakings of the kind, withheld through sheer improvidence and lack of business energy. Hospitals, particularly in their surgical wards, suffer cruelly when surprised by tropical heat in these circumstances. Cases of insolation admitted in large numbers feel the want of this adjunct to treatment; and another concomitant of the high temperature—snake-bite from the multiplication and aggressiveness of the "vipera berus" or "vipera chersea"—also finds its victims unrelieved of their maddening thirst by the failure of the ice-supply. The Turin agitators threaten legal action against the defaulting Società Anonima per la Fabbricazione del Ghiaccio Artificiale on the ground of "breach of contract," and it is believed that the State will have to intervene if the large centres of population are summer after summer to find themselves without due provision of what in these latitudes is a necessary of life.

August 5th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

International Congress for the Protection of Children.

THIS Congress will be held in Budapest next September and will last from Sept. 13th to 17th. Up to the present 454 members have joined it, among them being 62 from abroad. Those from abroad are chiefly French and Italian medical men, but there are also representatives of the other European countries as well as representatives from the United States of America. The Congress has appointed commissioners in Paris, Florence, and Berlin, who are working vigorously. Up to the present 55 lectures have been announced. The collaboration of several foreign authorities has been secured for the medical section of the Congress. Several literary works will appear in connexion with this Congress, among others a monograph in Hungarian or French dealing with 40 of the largest Hungarian institutions for the protection of children. The Minister of Justice will issue a comprehensive work upon the Hungarian Correcting Institutes. The municipality of Budapest will publish a book describing the orphan asylums, &c., of the place. The members will be welcomed at a dinner at the Hotel Royal on Sept. 12th. After the close of the Congress a trip will be arranged to Vacz (Waizen) to inspect the establishment for the deaf and dumb, then to Zebegeny to inspect the Francis-Joseph

[1] THE LANCET, July 17th, 1897, p. 172.

vacation-time colony for children, thence to the ruins of Visegrad. Another trip will be arranged to Cirkvenica on the shores of the Adriatic. Detailed information may be had on application to the bureau of the Congress, Budapest, Tőzsel-Roerut 43.

The Surgical Treatment of Exophthalmos Pulsans.

This subject has been carefully studied by Dr. Charles Bodon, in connexion with two cases which were operated upon in the Budapest surgical clinic. The first case was that of a man, aged 38 years, who was cured by ligature of the common carotid artery on the affected side. The second case, that of a workman, aged 36 years, contained many points of great interest. First the common carotid of the affected side was tied. The vision improved from $\frac{1}{5}$ to $\frac{5}{5}$, the pains in the heads ceased, and the pulsations of the eye were stopped. But the improvement was of very short duration, for all of the symptoms returned and the state of the patient was similar to that which he presented before surgical interference. Therefore one month later the other common carotid was also tied. The patient improved very much and soon left the clinic cured. Three months later the patient, both of whose common carotids had been tied and cut between the ligatures, returned again, showing anew all the characteristic symptoms of exophthalmos pulsans. Professor Dollinger now decided to tie the much-dilated supra-orbital vein, which is so often found pulsating in connexion with this affection. By this operation all troubles were relieved and months later the patient was seen to be well and able to do his work. Professor Dollinger has decided, when an opportunity occurs, to try first to tie the supra-orbital vein instead of the common carotid artery with a view of curing this disease. Dr. Bodon found by searching through the literature of traumatic exophthalmos pulsans that the case related above appears to be the sixth in which the ligature of both common carotids was effected to cure the exophthalmos and the second in which the pulsating supra-orbital vein has been tied.

August 2nd.

Obituary.

GEORGE HEWLETT BAILEY, M.R.C.S. ENG.

GEORGE HEWLETT BAILEY, late of Cavendish-place, who retired from practice as an anæsthetist in March last, died on July 8th. Mr. Bailey's death will be deeply regretted by a wide circle of friends and patients. He was born at Bath on Sept. 16th, 1827, and was educated at private schools at Bognor and Barnet. Mr. Bailey's professional studies were carried out at University College Hospital. Apprenticed to Mr. Redford, the well-known practitioner of Golden-square, he early obtained a bias towards art and general literature. After engaging in general practice Mr. Bailey became associated with the late Mr. Clover and with him he contributed the articles on Anæsthetics in Quain's Dictionary of Medicine. Mr. Bailey was well known as an expert and careful anæsthetist and held several hospital appointments, notably at the Charing-cross Hospital, the Dental Hospital of London, the Brompton Cancer Hospital, and the London Throat Hospital. Throughout his life Mr. Bailey took a keen interest in his speciality; he was twice elected President of the Society of Anæsthetists. Mr. Bailey's love of reading and art led him to devote much time to these pursuits and to the accumulation of a carefully selected library. He was kind to all, and many a friend has recollection of wise advice and genial encouragement and many a patient recalls with gratitude the sympathy and tact which Mr. Bailey brought to his work. Upon his retirement from the active discharge of his duties Mr. Bailey was the recipient of a set of old silver and an illuminated address presented to him by his friends and former colleagues.

VACCINATION IN CORNWALL.—At the meeting of the St. Germans Board of Guardians, held on August 2nd, it was stated that the vaccination fees for the past six months were four times the amount of those for the preceding half year.—At a recent meeting of the Liskeard Board of Guardians it was stated that there were 665 unvaccinated children in Liskeard Union.

THE BRITISH MEDICAL ASSOCIATION.

MEETING AT PORTSMOUTH.

ON Friday, August 4th, Surgeon-General Nash and the officers of the Royal Army Medical Corps gave a garden party at Netley and in the evening his worship the Mayor of Portsmouth gave a ball at the Town-hall. It was very largely attended and dancing was kept up to an early hour.

The President's entertainment to the members of the Association took place on Wednesday evening on the Clarence Esplanade Pier, when a large company enjoyed his hospitality and the charms of the surrounding sea and of the cool evening breeze. The sea was lighted up in all directions by powerful search-lights, which boldly revealed passing vessels, the forts, and the shores of the Isle of Wight. The dresses of the ladies and the native costume, resplendent with beetles' wings and coloured stones, of an Indian member of the profession, had a pleasing effect under the rays of the electric light. An excellent musical programme was provided by the fine band of the Royal Marine Artillery and by the Burgon Opera Recital Company, and the visitors remained to a late hour.

On Thursday afternoon a garden party was given to the members of the Association. The hosts were Inspector-General Macdonnell, C.B., R.N., and the medical officers of the Royal Navy, both active and retired. The guests, some 200 in number, were conveyed to Haslar pontoon by a steam launch. On the same afternoon Colonel Commandant Poore and the officers of the Royal Marine Artillery gave a garden party at Eastney Barracks.

The annual dinner of the Association was held in the Town-hall on August 3rd. About 300 members and guests were present. Instrumental music was supplied by the band of the Royal Marine Artillery, while Miss Lucy Johnson and Mr. Charles Ellison contributed songs. Dr. J. Ward Cousins, President of the Association, occupied the chair, and was supported by his worship the Mayor, the vicar of Portsea, the Roman Catholic bishop of Portsmouth, Dr. W. A. Elliston of Ipswich (the President elect) Dr. J. R. Thomson of Bournemouth (the President of the Council), the Rev. Canon Blake, Surgeon-Gnereal Cuffe, C.B., Mr. Andrew Clark (treasurer of the Association), Dr. Claremont (the local secretary), and others. After the loyal toasts Sir William King proposed "The Navy, Army, and Reserve Forces." Inspector-General Turnbull replied for the navy, Surgeon-General Cuffe for the army, and Surgeon-Colonel Sparrow for the reserve forces. Among other toasts were that of "The British Medical Association" (proposed by the Rev. C. G. Lang and responded to by Dr. J. R. Thomson) and "The Health of the President" (proposed by Professor Ogston). The last toast was "Our Foreign Guests." During the evening the Mayoress and the ladies of the local committee held a reception.

Mr. Mackenzie Davidson and Dr. Hugh Walsham gave their demonstration on x-ray photography on August 3rd at 11 o'clock at the Seamen's and Marines' Orphan School, Portsmouth. Mr. Mackenzie Davidson gave a demonstration of his apparatus for the localisation of foreign bodies and showed the method of using the stereoscope in x-ray work. Dr. Walsham gave a demonstration with the coil and screen and showed his stethendoscope for the examination of the chest. Dr. Walsham repeated his demonstration again at 3.30 by request.

THE GENERAL MEETINGS.

THE THIRD GENERAL MEETING.

THE third general meeting was held at 2.30 P.M. in the Upper Albert Hall on August 3rd.

The first business on the programme was the Address in Surgery which was delivered by Professor Alexander Ogston.

There was a large attendance and at 2.40 P.M. Dr. Cousins called upon Professor Ogston to deliver his address, which will be found in THE LANCET of August 5th, 1899, p. 325.

At the conclusion of the address Surgeon-General HARVEY, Director-General, Indian Medical Service, moved a vote of thanks to Professor Ogston, which was seconded by Mr. CLEMENT LUCAS and carried unanimously.

Dr. WARD COUSINS then said that he had the very pleasant duty of presenting the Stewart prize of the Association to Surgeon Frederick James Abercrombie Dalton, R.N., M.R.C.S. Eng., L.R.C.P. Lond., for his researches into beriberi. The prize consists of £50.

The meeting then proceeded to take the business adjourned from the second general meeting.

There were three motions standing respectively in the names of Mr. R. F. Tomlin, Mr. R. B. Anderson, and Dr. J. F. Butler-Hogan, but as none of these gentlemen was present there was no business before the meeting which consequently terminated. Previously to this, however, Mr. VICTOR HORSLEY called the attention of the President to the fact that the Association shorthand writer had taken no note of a resolution put by him and carried at the second general meeting. The substance of the resolution appeared in THE LANCET of August 5th, 1899, p. 376.

THE FOURTH AND CONCLUDING GENERAL MEETING.

The fourth and concluding general meeting was held in the Upper Albert Hall at 2.30 P.M. on August 4th.

The business consisted of the reception of various resolutions from the sections and the passing of votes of thanks to the Mayor and Corporation of Portsmouth, to the Lord Bishop of Winchester, to the Rev. C. G. Lang, and to the Roman Catholic Bishop of Portsmouth for their several efforts on behalf of the Association.

Votes of thanks were also passed to the naval and military authorities and to various private individuals for their courtesy and hospitality, to the various secretaries of committees for their labours, and finally, the President of Council having taken the chair, to Dr. John Ward Cousins, the President.

The meeting then terminated.

THE SECTIONS.

MEDICINE.

WEDNESDAY, AUGUST 2ND.

The Medical Tests Required at Present for Admission to the Public Services.

A paper opening this discussion by Sir DYCE DUCKWORTH was read in his unavoidable absence by the PRESIDENT of the Section (Dr. J. Mitchell Bruce). The author commenced by referring to the conditions under which candidates were at present selected for the public services. The selection rested absolutely with the medical officers of the respective services and grave responsibility rested with those gentlemen who were charged with the duty of seeing that while no detriment accrued to the services on the one hand no injustice was done to the rejected candidates on the other. On the whole he thought that there was no material cause for complaint in either respect. The worst that could be said as regards the army was that many were taken too young for foreign service and that they left the colours just as they were becoming mature soldiers, the period of service being so short. This, of course, did not apply so much to the sailors and marines who joined younger and left later. It had been suggested that an examination of physical qualities should form part of the competitive entrance examinations; but it ought to be remembered that in modern times the competition between nations was one of intellect rather than of physical strength. Of one fact he was fully persuaded: that a most unfair and, it seemed to him, an unnecessary hardship was inflicted on candidates by conducting the physical examinations after the literary and scientific examinations. As a result of this many young men spent most of the best and most plastic years of their life in acquiring a profession which they found afterwards they were, for some trifling defect, unable to exercise. Sir Dyce Duckworth hoped that the meeting would be able to record a protest against this practice in the form of a resolution. Some were inclined to think that the standard both of physical and intellectual qualities was too high. But apart from the competition between nations just referred to, one had to remember that in the present day there was a plethora of candidates; and whereas in former times one candidate applied now there were at least 10. Turning to the causes of rejection which had come under his notice he thought that some degree of colour-blindness should not be allowed to disqualify for military service, nor did he think that a moderate error of refraction should be deemed sufficient for rejection. Bad or deficient teeth were a very frequent cause of rejection; as many as 1800 recruits, he was informed, had been rejected in one year for this cause alone. This was a question which was worthy of investigation, for it was undoubtedly important that recruits should be adequately equipped in this respect. Deficient chest measurement was undoubtedly an adequate cause, and so also were causes which came under the headings "general debility" and "heart disease," but he was persuaded that many cases of the albuminuria of adolescence which he had observed had only been a transient condition and that many good candidates were lost to the service in this way. The points always to consider in such cases were two in number—(1) did the albuminuria date from scarlet fever or some other acute specific fever? or (2) were there at the time any other distinct evidences, such as high arterial tension, of the general effects on the system? Turning to the Indian Service, it was generally admitted that men were not fit to cope with the climate before they were 23 or 24 years of age. Before this age their resistance to malaria and other malign influences was extremely feeble and the temptation to drink and other vices was greater. Yet in spite of these known and acknowledged facts large drafts of very young men were continually being sent out to India, a practice which resulted in serious loss of life and great expense in invaliding them home. It would be well if these facts could be impressed on both the naval and especially the military authorities.

Professor WILLIAM OSLER (Johns Hopkins University) had had extensive experience of rejected candidates in the United States. There were in his experience three principal causes for rejection in the interpretation of which he could not always agree with the authorities. The first was a pronounced cardio-respiratory murmur, met with chiefly in young thin-chested men; the second was a systolic bruit in the pulmonary area; and the third was the albuminuria of adolescence. He could not attach great importance to the cardiac murmurs mentioned. They often disappeared under treatment. But he could not agree with the opener of the discussion as to the minor importance of the albuminuria in such cases. Much must naturally rest on the history of an acute specific fever and much on the evidences, if any, of secondary cardio-vascular changes, but he had often found that the albuminuria had persisted and assumed a very grave import. Undoubtedly serious injury was done to a man's chances in life by rejection. Not only was he debarred from the profession of his choice but he was prevented from receiving the beneficial effects of such a training as the army afforded. He felt inclined to think that countries where conscription was in force were amply compensated by the admirable training in physique and by the discipline of life which were inculcated at the most plastic and receptive period of life.

Dr. E. J. WALLACE (Southsea) referred to the great want of uniformity which existed among the different examiners both in the army and in the navy and mentioned several cases where the same candidates who were rejected on one occasion passed on another. He could not agree with a previous speaker about the non-importance of slight degrees of colour-blindness, and held it to be even of more importance in the army than in the navy. A certain degree of myopia might, he thought, to admitted. In Germany errors of refraction and colour-vision did not disqualify, yet the army did not suffer. Albuminuria of all kinds was very serious, for though he had seen cases where it passed off he could not regard it as unimportant.

Major TURNER, R.A.M.C. (Gibraltar), wished to refer to the importance of investigating the nervous and mental organisation of the candidate more than was generally done. He reminded his hearers that the plan of attack at the battle of Tel-el-Kebir was very nearly spoiled by the yelling of a soldier who was suddenly attacked with mania. He could refer to other instances of evil where the nervous system had not been sufficiently investigated. This investigation could readily be accomplished by inquiry into the personal and family history of candidates. If the parents were not available, as they mostly were, inquiries should be made of the schoolmaster where the recruit was educated.

Dr. T. D. SAVILL (London) had had considerable experience among rejected candidates in the various London gymnasia with which he was connected and in the British College of Physical Education. He had met with a great many strong healthy young men who had been disqualified by height. He was persuaded that too much importance was attached to the quality of height. Sir George Nares when selecting his crew for the Arctic expedition would take no one over five feet six inches in height and he attributed the healthiness of his party to this fact. Tall men were prone to pulmonary disease and, on the other hand, the healthiest soldiers in the whole army were the drivers in the Royal Artillery who were taken at five feet two inches and five feet three inches. There was a tendency among commanders to like tall men as presenting a finer appearance, but this test was wholly fallacious. In modern times the qualities were totally different from those when the present regulations were framed. Two qualities were now wanted—the ability to shoot straight and power of endurance. Both of these qualities, especially the latter, were to be found among shorter men. He believed that chest capacity was the test around which everything should centre and that the regulations as regards height should be revised. The speaker was well aware that medical officers were able to pass recruits for the army on "special" certificates if it was thought that certain deficiencies would be made up in the future. But this was not sufficient; he was persuaded from the number of eligible candidates whom he had seen rejected that the medical tests required revision. The previous speakers had done good service in calling attention to the hardship inflicted on candidates by physical disqualification after instead of before a long course of education had been pursued. The question was one of some difficulty, but by a preliminary physical examination there would be a presumptive fitness which, though it would not be final, would often save a candidate from much waste of time. He thought that candidates should have the option of a preliminary physical examination on payment, if necessary, of a small fee.

Dr. WILLIAM SYKES (Gosport) hoped that the time was far distant when physical tests would be abolished, for the worst army in the world (the Chinese) was one where only intellectual tests were employed. He agreed with the last speakers in hoping that the authorities would be able to place the physical anterior to the educational examination in point of time. Referring to the inequality of the medical tests as at present employed he mentioned a young man suffering from ichthyosis and another with an undescended testicle who after being rejected had gone up again and been accepted.

Surgeon-General H. S. MUIR, Deputy-Director-General, A.M.S., said that what was wanted was a true standard of the correlative measurements of age, height, weight, and chest measurement. Much uncertainty existed in this direction and there were no reliable figures. A little more uniformity might perhaps be desirable; for instance, the men were tested by the minimum chest measurement and the officers by the mean between maximum and minimum, but absolute uniformity was very difficult to attain.

Surgeon-General CUFFE, C.B., A.M.S. (Principal Medical Officer at Portsmouth), also referred to the difficulty of deciding the correlation of height, weight, and chest measurement. He thought that greater prominence should be given to chest measurement and in proof of this confirmed Dr. Savill's statement that the drivers in the Royal Artillery were the healthiest men in the service, a fact which could only be explained by the ample chest capacity which was insisted on. As regards the relative merits of intellect and physique they ought to hold an even balance and not go to either extreme. It was not the best time to examine a candidate's physical fitness after a long intellectual training when they certainly were not in the best physical condition. It seemed hard sometimes to disqualify men for some trifling defect, but they must remember that it was the duty of the medical officers to get the best possible men into the service and the candidates were nowadays so numerous that it was necessary to have a rigid and high standard of fitness.

Dr. CALWELL (Belfast) and Surgeon-Colonel WELCH (London) also took part in the discussion.

The PRESIDENT of the Section summed up, in reply, and the following resolutions were then passed:—

1. That the Council of the British Medical Association be requested to communicate to the War Office that it is the opinion of this section that the physical examination of candidates for the army should precede the educational.
2. That the Council of the British Medical Association be requested to communicate to the War Office that it is the opinion of the Medicine Section that soldiers ought not to serve in the tropics before the age of 22 years.
3. That the physical standard for admission to the public services requires reconsideration, and that the Council be also requested to communicate this resolution to the War Office, the Admiralty, and the other Government bodies concerned.

Professor WILLIAM OSLER then read a paper on

Hypertrophic Cirrhosis with Pigmentation of the Skin (Hæmochromatosis).

In 1882 Hanot and Chauffard described a condition of hypertrophic cirrhosis with bronzing of the skin and diabetes—*diabète bronzé*. French writers had paid much attention to the subject and Letulle, Marie, and others had recently discussed the question very fully. Hanot at first, supposing the liver to be at fault, attributed both the pigmentation and the diabetes to disorder of its function. The chief stress had been laid upon the diabetes, but recently cases had been reported in which the cirrhosis and the pigmentation had been present without glycosuria. The pigment had an ochre brown or rust colour and was distributed widely in the organs—the liver, the pancreas, the lymph glands and the skin, but not in the kidneys. It was an iron-containing pigment and could be readily distinguished from the normal pigment of the skin and the brown pigment of the heart muscle. Widespread distribution of this rust-like pigment was first described by Quincke and subsequently by von Recklinghausen as hæmochromatosis, so that it was not by any means confined to the condition under consideration. About 30 cases of so-called *diabète bronzé* had been described, almost all by French writers, in five of which no diabetes had been present (Letulle). Professor Osler described two cases with general hæmochromatosis and pigmentation of the skin and hypertrophy of the liver and spleen but without diabetes. In one the diagnosis was made during life and the patient was in good condition and able to be at work, though the liver was greatly enlarged. The pigmentation of the skin at first suggested Addison's disease. The position of the pigment in the subcutaneous tissue and in the cells of the sweat glands as well as the iron reaction were all important points in the diagnosis. The etiology of the condition was unknown. The form of pigment and its wide distribution suggested hæmolysis and recent observers had suggested that it was some form of chronic toxæmia. The widespread sclerosis of the organs resulted, as in malaria, from the deposition of the pigment; others thought that it was a primary disorder of metabolism. The whole question was very fully discussed by Anschütz in a recent number of the *Deutsches Archiv für Klinische Medicin* and by Opie in the current volume of *Welch's Journal of Experimental Medicine*.

The PRESIDENT of the Section and Dr. ROLLESTON (London) made some remarks on the subject.

Discussion on the Pathology of Gout.

Dr. ALEXANDER HAIG (London) read a paper entitled "Uric Acid and the Circulation: Some New Methods of Estimating its Effects." He commenced by reminding his hearers that high blood-pressure and defective capillary circulation were constant concomitant signs of uric acid headache. The headache was known to be due to uric acid because all diet and drug treatment that relieved it diminished the amount of this substance in the blood and urine. It was highly probable that the headache was due to the effects of high blood-pressure on the cranial circulation. If the explanation of this relationship in point of time between these signs and symptoms was, as was suggested, that uric acid was the cause of the defective capillary circulation and the high blood-pressure, there ought not to be much difficulty in demonstrating the fact, and the object of that paper was to bring forward some of the results obtained. Raynaud said that in the disease which bore his name as much as

30 seconds might elapse before the colour returned in an area of skin rendered white by pressure, while in a piece of normal skin it would return in one or two seconds. Dr. Haig maintained that Raynaud's disease was due to uric acid, and it followed that similar but less marked alterations in the rate of the capillary reflux (as he proposed to call it) would be found to correspond with other and less marked alterations in the amount of uric acid in the blood. This was what he now found to be the case. He also added to this test an observation of the rate of disappearance of the "after-image," or fatigue image of the retina, as a measure of the good or bad capillary circulation in the retina. Daily observation proved that all of these things altered together; that slow capillary reflux went with high blood-pressure or dilated radial artery and with slow disappearance of the "after-image," or *vice versâ*. Further, it showed that these results all followed exactly the well-known physiological fluctuations in the excretion of uric acid, the capillary reflux being slow in the morning and quick in the evening. He concluded by enunciating the proposition that uric acid controls the capillary circulation of the body, and any accurate record of such capillary circulation is thus an index of the quantity of uric acid in the blood and urine.

Dr. ARTHUR P. LUFF (London) read a paper on the Gelatinous Form of Sodium Biurate and its Bearing on the Pathology of Gout. Uric acid when first introduced into the blood existed solely therein as the sodium quadriurate. That quadriurate was in the dissolved state a very unstable body and soon changed into the sodium biurate, which, however, was not at once precipitated, since it at first assumed the form of the gelatinous biurate in which form it was a much more soluble compound than the crystalline biurate. That gelatinous modification was afterwards converted, either slowly or rapidly, according to various conditions, into the crystalline compound. Dr. Luff's paper gave an account of an investigation made of the physical and chemical properties of the gelatinous form of sodium biurate and of their bearing on the gouty process. Towards the expenses of the research a grant was made by the Scientific Grants Committee of the British Medical Association. The gelatinous form of sodium biurate was prepared in several ways. It was about five times as soluble in blood serum and artificial blood serum as the crystalline variety. A series of experiments were conducted to ascertain the effect respectively of sodium bicarbonate and potassium bicarbonate on the conversion of the gelatinous biurate into the crystalline form. It was found that when artificial blood serum was charged with the gelatinous biurate the addition of varying quantities of sodium bicarbonate accelerated the change of the gelatinous biurate into the crystalline form both as regards time and quantity, and directly in proportion to the amount of sodium bicarbonate added. It was found that potassium bicarbonate had a precisely opposite effect and that it delayed and checked the conversion of the gelatinous biurate into the crystalline form, also both as regards time and quantity and in direct ratio to the amount of potassium bicarbonate added. The conclusions arrived at were that the higher the alkalinity of the blood from the presence of sodium bicarbonate the more rapid and the more complete was the conversion of the soluble gelatinous biurate into the comparatively insoluble crystalline form. This probably explained why mineral waters rich in sodium bicarbonate were well known to accelerate an attack of gout in many gouty subjects. On the other hand, this investigation showed that the higher the alkalinity of the blood from the presence of potassium bicarbonate the more was the conversion of the gelatinous biurate into the crystalline form delayed as regards time and diminished as regards quantity. This probably explained the well-known beneficial effect of the alkaline potassium salts in the treatment of acute and subacute gout.

Dr. WILLIAM BAIN (Harrogate) read a paper entitled "An Experimental Contribution to the Study of Gout." The first part of the paper dealt with the detection of uric acid in fluids rich in proteids such as blood. Dr. Bain having tried the various methods in vogue for the separation of uric acid from blood mentioned by Dr. Luff in his book on gout came to the conclusion that they were not sufficiently delicate to detect the excessively small percentage which would be present in normal blood if uric acid was formed by the liver. The second part of the paper referred to a case of chronic gout in which the urine was analysed daily. The patient was put on a fixed diet and after the lapse of a week the following drugs and articles of diet were administered—viz., colchicum, sodium salicylate, spinach, and thymus. The analysis of the urine included the total determination of urea, uric acid, phosphoric acid, and alloxan bases. The leucocytes were counted daily. An inverse ratio was observed between the leucocytes and the excretion of uric acid, and the excretion of phosphoric acid followed closely that of the uric acid. These facts tended to show that uric acid was derived from nuclein. Sodium salicylate increased the excretion of uric acid evidently at the expense of the leucocytes. Colchicum did not seem to have any effect on the excretion of uric acid. During an acute exacerbation there was no doubt of its beneficial influence, but the nature of that influence had still to be discovered. Spinach had no effect on the uric acid excretion. Thymus produced the usual physiological effect. The excretion of the alloxan bases lay within physiological limits and the base bore a normal relationship to the uric acid.

Dr. WILLIAM SYKES (Gosport), in the discussion which followed, wished to support the use of sodium salicylate in gouty as well as in rheumatic conditions. His personal experience confirmed this and the general usefulness of the salicylates.

Dr. W. J. TYSON (Philadelphia) advocated Vichy water, the usefulness of which in gouty conditions probably depended on the sodium bicarbonate it contained. As long as one quart was taken daily a patient would remain free from migraine, but as soon as this was left off the attacks would return.

Dr. HAIG, in his reply, wished particularly to point out the conditions in which sodium salicylate failed—viz.: (1) if given in conditions of general debility or (2) in sequence to colchicum. In either of these circumstances it failed; otherwise it was extremely useful in all uric acid conditions.

Dr. LUFF, in replying, felt so convinced that the salicylates were of use only in rheumatic cases that he was in the habit of regarding this amenability to salicylate as a means of diagnosis between rheumatism and gout. If the patient improved the disease was rheumatic, if not it was gout.

Dr. F. J. POYNTON (London) and Dr. C. W. SUCKLING (Birmingham) also took part in the discussion.

SURGERY.

WEDNESDAY AUGUST 2ND.

The President, Mr. H. T. BUTLIN, delivered a short address, as already reported in THE LANCET of August 5th, p. 377, and he then called upon Colonel Stevenson, R.A.M.C. (Netley), to open a discussion on

The Diagnosis and Treatment of Gunshot Wounds of the Abdomen.

Colonel STEVENSON said that the importance from the military surgeon's point of view of the subject for discussion could hardly be over-rated, while for the surgeon in civil practice it carried an almost equal interest. If this statement should appear to suggest that cases of abdominal injury by gunshots were of greater importance to the army surgeon than to his colleague in civil life, it was only because in the latter case the lines on which they should be treated were clear and undisputed, while in the former the conditions under which warfare was carried out always rendered the treatment of such injuries according to present-day ideas difficult and sometimes even quite impossible. Civil surgical practice had for some years been freed from the dread of the results of interference with a serous membrane, and operations implicating the peritoneum were carried to a successful issue with as great certainty as were others formerly considered of a less serious nature. But it had been only in the most recent campaigns that any systematic efforts had been made to treat gunshot wounds of the abdomen according to the promptings of modern scientific surgery, and it was only just now that one expected to find in the official report on the surgery of a war a table detailing the number of laparotomies done for gunshot wounds, and the percentages of deaths and recoveries following them, as surely as one always had been able to rely on obtaining from it similar data for such operations as excisions of joints and amputations of limbs. It was only since the introduction of the antiseptic method that wounds of the abdomen had been treated otherwise than by rest and opium, the expectant method, under which nearly all proved fatal. Military surgeons had great difficulties to contend

with in performing abdominal operations, for it should be remembered that the operations must be carried out in field hospitals which were mere temporary resting-places for wounded men and might require to be evacuated within a few hours in order to be ready to advance with the army, thus necessitating transport of the wounded towards the base of operations. The *personnel* of the field hospital was kept as low as possible and the work done in them during the first hours of a battle was performed at extremely high pressure, large numbers of wounded men arriving for treatment almost simultaneously. Again, men might have to be left on the ground for a long period before they could be picked up by the bearer companies, a factor which was against success in operations for wounds of the intestines; and, lastly, the military surgeon's mind must naturally be influenced by the feeling that "the greatest good to the greatest number" was the goal for him to aim at, and he knew quite well that the time spent on one or two abdominal sections might be more profitably expended if devoted to cases of less serious injuries. Penetrating wounds of the abdomen when treated merely by rest and opium had a death-rate of between 90 and 92 per cent., as shown by the Crimean War and the American Civil War, and it was very probable that penetration had not really occurred in the 8 or 10 per cent. of cases which recovered. When a projectile traversed the abdominal cavity one might rely with practical certainty on the occurrence of one or both of two very serious conditions—the extravasation of intestinal contents or hæmorrhage. Each of these required mechanical means for its control, otherwise death—early in the case of hæmorrhage, later in perforation—was almost certain to result. The indications for treatment were obvious. The abdomen should be opened, the hæmorrhage made to cease, the perforation closed, and the peritoneum cleansed. Even when so treated many of these cases would die, but the fatal result would occur less often than when the expectant plan was employed. In 1881 Marion Sims suggested that as extensive operations involving the peritoneum could with antiseptic measures be recovered from it was possible that active treatment by operation might afford better results than the expectant plan in penetrating gunshot wounds of the abdomen. About 13 per cent. of the killed and wounded in battle were as a rule found to have received injuries of the abdomen. Of these 11 per cent. died on the field and only 4 per cent. reached the field hospitals. Hæmorrhage even from small vessels in wounds of the abdomen was curiously persistent and profuse and there was but little tendency to the formation of clots in the cut ends of vessels. To control this hæmorrhage nothing but an abdominal section would suffice. The other common cause of death in these injuries was peritonitis from extravasation of the intestinal contents, and for the treatment of the perforation and removal of the extravasated matters a laparotomy was necessary. It was possible that minute punctures might not permit of extravasation, but wounds caused by bullets were very unlikely to be of this simple character. A further point was that intestinal wounds from gunshot were nearly always multiple. The deduction to be made from all the facts was that "all penetrating gunshot wounds of the abdomen should be treated by immediate laparotomy." If from any cause, the overcrowded condition of the field hospitals, the want of antiseptic materials, or for other reasons, this operation could not be carried out, then only was the expectant plan justifiable. As soon as penetration of the parietal peritoneum had been diagnosed laparotomy should be immediately performed, for every half hour's delay lessened the patient's chance of recovery. Coley stated that the mortality for cases operated on within 12 hours was 53·9 per cent., while for those operated on at a later period it was 77·3 per cent. Many cases of apparently simple contusion without wound of the soft parts caused by unexploded shells striking the abdomen at a low rate of velocity might give rise to very serious injury of the contained viscera. In these might be found the three primary symptoms which accompanied all severe abdominal injuries—namely, shock or collapse, vomiting or nausea, and pain. The degree of severity of these symptoms was no criterion of the amount of internal injury, but the diagnosis must be based chiefly on the course these symptoms followed. In cases of mere contusion they tended steadily to diminish, while in those accompanied by internal injury they persisted and became more marked as time went on. The symptom of tympanites caused by the escape of the intestinal gases into the general cavity of the peritoneum was of no value, as it was impossible to distinguish it from tympanites caused by over-distension of the intestines. Disappearance of liver dulness was no trustworthy sign of the presence of free gas in the peritoneum, and the liver dulness might still be present even when perforation had occurred. In the treatment of these cases of contusion opium should not be given if its use could be avoided, as it tended to mask symptoms. As soon as it was evident from the aggravation of the symptoms that some visceral lesion had occurred an abdominal section should be performed. Returning to the question of operation in penetrating wounds of the abdomen it must be mentioned that Senn was of opinion that laparotomy should only be performed if a rupture of the intestinal tract had been shown by his method of inflating the intestinal tract by hydrogen gas. He said that a pressure of two and a half pounds to the square inch was sufficient to overcome the ileo-cæcal valve and was harmless to the coats of the intestine. Wounds of the large intestine were less fatal than wounds of the small intestine, and this was probably due to the fact that the large intestine was not in every part entirely surrounded by peritoneum. The results of laparotomy in gunshot wounds of the abdomen were satisfactory when it was considered that when treated on the expectant plan the mortality in these cases was over 90 per cent., for Morton of Philadelphia showed that in 234 cases operated on in Europe and America the death-rate was only 58·9 per cent. Profound collapse might be considered as contra-indicating an operation until sufficient recovery had taken place; but if the collapse were due to hæmorrhage the additional risk must be incurred. When the patient first came under observation external warmth must be applied to relieve the collapse and ether or strychnine might be injected subcutaneously or stimulant enemata might be given. When the patient had recovered from the shock, or earlier if hæmorrhage were diagnosed, the wound must be examined to see if penetration had occurred, the wound being enlarged if necessary. If penetration had taken place the abdomen must be opened, usually in the middle line; the hæmorrhage should then be controlled, and then the intestine should be attended to and the stomach and the whole of the intestine should be examined, as usually there were several wounds; the average number was given by Greig Smith as 5·4. Each perforation should be sutured as it was discovered. Resection was necessary, (*a*) when the loss of substance in the tube would cause a diminution of its calibre by one-third; (*b*) when several perforations were found close together; and (*c*) when the mesenteric edge was implicated. Of the direct methods of end-to-end anastomosis, no mechanical supports being used, Maunsell's was that which could be most rapidly performed, while if a mechanical aid was employed Mayo Robson's bobbin, Greig Smith's bobbin and Murphy's button had all given good results. As in the vast majority of these cases contamination of the peritoneum by fæcal matter was certain to have occurred free irrigation of the cavity was necessary before the abdomen was closed, or in some cases sponging might be necessary. Drainage by Keith's tubes or by capillary gauze drains should be provided for the first 24 or 48 hours in all cases in which perforations of the intestines had been found. As regarded the results obtained from laparotomy for gunshot wounds in the later campaigns Senn reported that all the cases died which were operated on in the American army during the Spanish-American War. In the Græco-Turkish War Mr. Abbott reported that one case of hæmorrhage recovered and also one of injury to the liver. In the Tirah campaign, of eight cases of gunshot wound of the abdomen five were operated on and all died, four from hæmorrhage and one from peritonitis. Finally, Colonel Stevenson said that he would suggest that the two questions on which it was desirable to have definite statements of opinion were: (1) did distinct evidence of penetration of the abdominal walls in gunshot cases warrant surgical interference? and (2) what were the best means of performing end-to-end anastomosis after resection of a portion of intestine?

Dr. WARD COUSINS (Portsmouth), the PRESIDENT of the Association, was inclined to think that it was not always desirable in these cases of gunshot wound of the abdomen to do laparotomy immediately, for the diagnosis was by no means easy and symptoms might be wanting; but if symptoms of injury became evident then laparotomy should be performed at once. As to the line of incision for the abdominal section he preferred to make it through the point of penetration, as thereby the operator was more likely to come upon

the damaged viscera. It was useless to expend much time in searching for the bullet. The best method of retracting the edges of the incision was to insert silk stitches on each side. In end-to-end anastomosis he had a very high opinion of Murphy's button. He considered that, on the whole, wounds of the stomach were less serious than wounds of the intestine.

Dr. A. BARRY BLACKER (London) spoke chiefly on the value of the x rays in recognising bullets in gunshot wounds of the abdomen. It was not always easy to find the bullet even with the x rays, as the bullet might move with respiration and the shadow was enlarged and indistinct. In one case the excursus of the bullet was two and a half inches. The remedy for this was to examine during only one phase of respiration, but even then there was generally some blurring.

Major W. C. BEEVOR, R.A.M.C., expressed his agreement with those who advocated abdominal section in these injuries. This was a comparatively simple matter in civil life, but in the field it was very different. Colonel Whitehead in the Tirah campaign had met with very great difficulties; for instance, at the action at Dargai the only water that was available for all surgical purposes was that of a small village pond, into which doubtlessly flowed the liquid excreta of men and animals. The dressings had to be manipulated by hands which were dirty and the number of wounded was so large that only the first dressing could be applied. To show the great difficulties in bringing up supplies the speaker stated that the first five transport mules which arrived at the top of a ridge were shot dead by some natives 2800 yards distant. He quoted two cases of bullet wound of the abdomen. The first case was that of an officer who was shot at the commencement of the advance; the wound was in the iliac region and was apparently penetrating; he insisted on walking down to the dressing-station and recovered under an expectant treatment. The other patient was a dhooli-bearer who was shot tangentially in the abdomen; he was without treatment for many hours and when he ultimately reached the hospital omentum was found to be protruding; this was cut off, the abdominal wound was irrigated, and he recovered. He, the speaker, considered that irrigation was very useful before the operation and it might be performed even before the enlargement of the external wound. Also, if collapse were to come on during the operation the operation should be stopped and irrigation performed. The x rays were of much service in localising bullets and especially useful was Mr. Mackenzie Davidson's apparatus.

Mr. DAMER HARRISSON (Liverpool) was not inclined to trust to the presence or absence of liver dulness in the diagnosis of wound of the stomach or intestine. He had found the liver dulness absent in a case of typhoid fever; he operated, but found no perforation, though he was able to relieve a volvulus of the small intestine and the patient recovered. He quoted a case of bullet wound of the stomach in which vomiting of blood occurred. Mr. A. H. Wilson of Liverpool operated and sutured both the anterior and the posterior walls of the stomach which had been perforated by the bullet and the man recovered. In this case a quart of hot neutral saline solution was left behind in the peritoneal cavity and he thought that this had been useful. The operation was performed five or six hours after the injury.

Mr. CLEMENT LUCAS (London) suggested that the improvements in the future would be in the direction of bringing the wounded more rapidly to hospitals fully equipped for abdominal operations. He was under the impression that in civil practice bullet wounds were becoming more frequent and a short time ago he had seven bullet wounds under his care at one time. Of all bullet wounds those of the abdomen were most dangerous. He would suggest the employment of subcutaneous injections of ergotin for the immediate treatment of abdominal hæmorrhage, for he had found it of distinct use in a case of ruptured kidney and a case of ruptured liver. The signs of perforation of the intestine were great abdominal pain, contraction of the abdomen, contracted pupil and a hard pulse, while in the case of hæmorrhage the pulse would be soft. He had several times noticed that the pulse improved in character while irrigation was going on. In conclusion he brought forward the following motion:—

In consideration of the great increase in the number of bullet wounds in consequence of the free sale of revolvers and pistols this section desires to impress upon the Council of the British Medical Association the importance of furthering a Bill for the restriction of the sale of small arms.

The motion was carried *nem. con.* and the PRESIDENT stated that he would forward it to the Council.

Dr. JAMES MURPHY (Sunderland) attached much importance to the absence of the liver dulness as a sign of perforation of the stomach or intestine in cases where there was no abdominal wound. He thoroughly agreed with the advice that opium should be avoided in cases of abdominal injury. Murphy's button was very useful, for by its means end-to-end anastomosis could be effected in four minutes. Irrigation of the abdomen was of great use at all stages of abdominal operations.

Mr. J. PAUL BUSH (Clifton) did not consider that absence of the liver dulness was of any value as an indication of perforation. He had a high opinion of the value of Murphy's button as a very rapid means of effecting intestinal anastomosis. He had experienced great difficulty in diagnosing if there were any more perforations after closing one or two.

Surgeon General T. F. O'DWYER laid stress on the importance of making arrangements to get the wounded men to hospitals where they could be treated as satisfactorily as in civil hospitals. Under suitable conditions immediate laparotomy was the best treatment.

Colonel STEVENSON, in reply, pointed out that the new field equipment was a great improvement on the one previously employed and that by its means conditions suitable for abdominal operations were obtainable in field hospitals on active service. As to the diagnosis, no diagnosis was needed if the wound was certainly penetrating. He had known liver dulness to be present in cases in which perforation had occurred and therefore he did not consider the sign to be of any value.

The PRESIDENT of the section mentioned that he had experienced much difficulty in one case in diagnosing if a bullet wound of the chest had perforated the diaphragm and so injured abdominal viscera.

Mr. CLEMENT LUCAS read the notes of

A Case of the Removal of a Bullet and of a Detached Fragment from the Interior of the Skull after Localisation by the X Rays.

A man shot his wife and two children. The patient was the younger daughter, aged 10 years; she was shot in the back of the head and when admitted to hospital she was collapsed but there was no sign of compression. The wound was over the upper part of the occiput and brain substance protruded from the wound. She vomited two hours after admission and every time she took any food, so she was fed by the rectum. There was no paralysis. A skiagram showed the main portion of the bullet near the vertex and a small fragment just within the aperture. Fragments of bone were removed and two pieces of bone were marked out and cut away and the bullet and fragment having been felt by the finger were readily removed. The incisions healed by first intention, but there was some suppuration along the track of the bullet. No vomiting occurred subsequently to the operation and no paralysis followed. The patient at the present time was nearly convalescent. Mr. Lucas then read the notes of a second case in which a bullet was removed from the front of the second cervical vertebra after localisation by the x rays. This patient was the mother of the little girl whose case is given above. The skiagram showed the bullet by the second cervical vertebra. In this situation a hard mass could be felt through the mouth and the mucous membrane of the pharynx was incised over it, and it was then found to be an exostosis. The sterno-mastoid was divided transversely and the bullet was found embedded in the rectus capitis anticus major and it was easily removed. The sterno-mastoid was ligatured and the patient rapidly recovered.

In the discussion Mr. DAMER HARRISSON related three cases of bullet wound of the brain in the first of which the projectile had passed from the temporal region into the orbit, then into the anterior fossa, and then into the frontal lobe, whence it was removed after trephining. The patient improved, though his mental condition was peculiar; a month later he displaced the dressings, the wound became infected, and he died 60 hours later. In the second case a policeman was shot in the orbit and the bullet was found in the spheno-maxillary fossa. The operation for removing it was long and difficult. In the third case a man shot himself in the right temporal region and a hæmatoma formed on the opposite side of the skull and the bone was fractured. The skull was trephined over this and the bullet

was being removed when it fell back into the lateral ventricle and the man died.

The PRESIDENT of the section had had two cases of bullet wound of the chest and in neither of them could any sign of the bullet be seen in the skiagram after even an hour's exposure.

Dr. WALKER DOWNIE (Glasgow) described two cases of

Sarcoma of the Tongue

and exhibited the specimens and photographs. He remarked that primary sarcoma of the tongue was rare and only 30 cases had been recorded. There were two forms, the interstitial, of which there have been five cases, and the pendulous. The first case was of the pendulous variety and occurred in a man, aged 34 years. He noticed a swelling on the posterior aspect of the tongue; it burst a fortnight later and blood was discharged. The patient felt very weak and in five weeks he lost two stones in weight. The swelling seemed to fluctuate but only blood escaped on puncture. The cheek was incised and the growth with a portion of the tongue was removed. He was fed by a stomach tube and recovered completely. The growth microscopically was found to be composed of "richly cellular fibrous tissue, very cellular in parts, with a well-marked capsule." Recurrence was the exception in the pedunculated form. The second case was that of a medical man, aged 23 years. A fish bone hurt his tongue and he lost flesh. The right tonsil was enlarged and the right side of the tongue was swollen. One enlarged gland was found on the right side of the neck. One month later a localised swelling was found; this increased in size and a piece was removed and was found to be a small round-celled sarcoma. The whole tongue was removed. The patient recovered completely.

The PRESIDENT of the section had seen only one case of sarcoma and that was embedded in the substance of the tongue and it was very soft. Half the tongue was removed and no recurrence had occurred when the patient was last seen, at least 18 months later. In those cases in which inflammation was present it was very difficult to be sure of the diagnosis of sarcoma.

Mr. J. PAUL BUSH read a paper on

Some Operations on the Jaws for Extensive Malignant Disease.

The first case was that of a girl, aged 15 years, who had suffered from pain in the upper jaw for nine months. The upper lip swelled and the pain became less. A piece of the growth was removed from the upper jaw and it was found on microscopic examination to be sarcomatous. She entered the Bristol Royal Infirmary four months later and an extensive growth was seen to be present; it involved the left and a part of the right superior maxilla, pushing forward the nose. The left palate bulged. An incision was made on each side of the nose and through the upper lip; the bone was sawn through opposite the first molar tooth on each side and the intervening bone was removed. The severe hæmorrhage which ensued was controlled by plugging the wound with iodoform gauze. A few days after the operation an artificial upper jaw was worn part of each day to prevent retraction of the upper lip. The growth was found to be a small spindle-celled sarcoma. The second case was that of a man, aged 60 years. He had an extensive epithelioma of the anterior half of the tongue and the floor of the mouth. There were enlarged glands below the jaw and he complained of much pain. An incision was made below the jaw by which both lingual arteries were tied. The lower jaw was sawn through on both sides in front of the angle and the tongue was dissected off from the hyoid bone and removed with the body of the jaw. The infected glands were also removed. As the breathing was bad from the loss of support anteriorly a silk suture was passed in front of the epiglottis and fastened to the skin. This improved the breathing, but it was found necessary to hold forward the stitch for 36 hours. The patient was fed with a tube and no nourishment was allowed to get into the mouth cavity. He was fed with soft solids after three weeks; he was now doing well and had increased two stones in weight. He liked to use a short wide tube to feed himself, for occasionally the food got into the larynx. No recurrence had occurred up to the present.

Mr. DAMER HARRISSON asked if any trouble had been experienced with the saliva, as this was a great source of trouble in a case where Mr. Alexander of Liverpool had removed nearly the whole of the lower jaw.

The PRESIDENT of the section expressed the opinion that they had been too despondent in many cases of malignant disease of the upper jaw. He had been much impressed by the excellent results obtained at Göttingen by extensive operations. The difficulty of breathing referred to was best combated by tracheotomy which should be performed in all such cases.

Mr. CLEMENT LUCAS had met with this form of difficulty of breathing and had overcome it by stitching the epiglottis to the skin.

Mr. PAUL BUSH, in reply, said that his patient had had no trouble with the saliva.

OBSTETRICS AND GYNÆCOLOGY.

WEDNESDAY, AUGUST 2ND.

The proceedings of the section were opened by the President, Dr. GRANVILLE BANTOCK (London), in an address an abstract of which we published in THE LANCET of August 5th, p. 378.

Dr. HERBERT SPENCER (London) then opened a discussion upon

The Treatment of Fever following Delivery, with Special Reference to Serum-therapy.

He understood his subject to include the treatment of "puerperal fever" (i.e., fever during the puerperium caused by microbic infection from without) and fever in the puerperium resembling puerperal fever. From this point of view fever in the puerperium could be arranged in four classes. The first class had been styled "one-day fever" and was characterised by a slight elevation of temperature, rarely exceeding 102° F., about the third day, and usually cured by the administration of a mild aperient. The second class was due to complications which were not referable to the labour. Certain febrile diseases, such as influenza, scarlet fever, acute phthisis, and typhoid fever, closely resembled puerperal fever and deserved, therefore, special consideration. The diagnosis of influenza was sometimes used as a balm to the conscience of the practitioner who was not thorough in his application of antiseptics. Cases so diagnosed were often due to septic infection; nevertheless, he had seen undoubted cases during an epidemic and two of them terminated fatally. Septicæmia accompanied by a scarlatiniform eruption was often mistaken for scarlet fever. Acute phthisis closely resembled septic pneumonia and both forms of disease were equally unamenable to treatment. Typhoid fever presented great difficulties in diagnosis in cases in which the temperature rose in the early days of the puerperium. He had recently seen two cases; in both Widal's reaction gave positive results and as both terminated fatally the diagnosis was confirmed by the discovery of typhoid ulcers in the intestines. The third class of fever met with in the puerperium was due to infection from pre-existing lesions, such as ovarian and fibroid tumours, cancer, stone in the bladder, pyosalpinx, appendicitis, &c. The treatment of these cases consisted in the discovery and removal of the lesions during pregnancy. The fourth class was due to external infection and was what they understood by "puerperal fever." Recent bacteriology of puerperal fever showed that it might have its origin in a number of micro-organisms; important services in this department had been rendered by Döderlein, Strünckman, and Whitridge Williams. The latter in investigating 26 cases found streptococci in eight, staphylococci in three, colon bacilli in six, gonococci in two, anaerobic bacilli in four, diphtheritic bacilli in one, gas bacilli in one, and typhoid bacilli in one. Clinically, fatal puerperal fever was met with under three forms: acute septicæmia, which terminated fatally within a few days owing to the virulence of the poison; lymphatic septicæmia, the usual form, characterised by a rigor at the onset and septic peritonitis; and venous septicæmia, characterised by a succession of rigors and by septic phlebitis, and frequently by secondary deposits. Mild cases of puerperal fever were met with, as sapræmia—i.e., poisoning by the chemical products of micro-organisms—and local infection of the peritoneum, the cellular tissue, and the veins. Coming to the treatment of puerperal fever the most important element consisted in prophylaxis. It was important to avoid all unnecessary injury during labour by too frequent examinations or unnecessary forceps operations; while, on the other hand, labour should not be allowed to be unduly prolonged. Careful management of the third stage of

labour was most important and it was particularly necessary to make sure that no placenta or membranes or clots were allowed to remain in the uterine cavity. Döderlein's experiments showed that in normal cases vaginal injections rather favoured the growth of micro-organisms than otherwise, but in every case the vulva should be washed with soap and water, then rinsed with water, and afterwards swabbed with 1 in 1000 perchloride of mercury. The practitioner's hands, wrists, and forearms should be carefully cleansed in the same way. The ideal clothing was some white washable material. The question presented itself whether it was necessary for a medical man who had attended a case of puerperal fever to abstain from practice for a time. Mere abstention from practice he believed to be no safeguard, but thorough disinfection would immediately enable the practitioner to attend another lying-in woman with safety. As regarded the actual treatment of puerperal fever the first necessity was to make a thorough examination of the patient and of the uterus. An intra-uterine examination should be made in nearly every case, and in his experience cases apparently hopeless had been saved by the detection and removal of putrid portions of placenta or sloughing fibroid tumours. In making this examination he urged the importance of wearing rubber gloves which could be obtained so thin as to cause little or no interference with tactile sensation. Generally speaking, the uterus should be completely emptied by the finger; occasionally large blunt-ended forceps might be used, but the curette should never be employed after labour at full term. He had known the finger to be forced through the wall of the puerperal uterus, and the danger associated with the use of a sharp instrument like the curette must be much greater. After emptying the uterus the cavity should be irrigated once with a solution of iodine (one drachm of tincture of iodine to one pint) or a weak solution of perchloride of mercury or carbolic acid. The treatment of general septic peritonitis had been much discussed of late years. It had been proposed to open the peritoneum either by the abdomen or the vagina, and even to remove the uterus, and a number of cases successfully treated by both methods had been published. If the presence of fluid could undoubtedly be recognised then he thought the peritoneum should be opened, but he was not in favour of removal of the uterus except in cases of carcinoma, or of fibroid tumours which could not be enucleated. Methods of remotely influencing puerperal fever by the nuclein treatment (which aimed at producing an artificial leucocytosis), saline infusion into the celluloid tissue, and intravenous injection of antiseptics, were not of much value. The same must be said of drugs. Tonics and stimulants were useful, but in his opinion antipyretics should never be employed; cold-packing was the best method of reducing the temperature. The administration of food at regular intervals and in quantity as great as the patient could take was very important, and alcohol could be given in large quantities with benefit. Coming to the serum treatment he said that since its introduction by Marmorek in 1895 a very large number of cases had been treated by this method. Some observers regarded it as beneficial, others as useless or harmful, and, speaking generally, it might be said that those who had the greatest experience were the least impressed with its value. *A priori* it did not appear to be a scientific treatment to administer, in a disease which was by no means generally associated with a streptococcus, an antitoxin produced by that organism. It might be useful in cases due to the streptococcus, which were the only cases for which Marmorek recommended it. Yet the committee of the American Gynæcological Society, which investigated the subject, showed that the mortality after its use was 33 per cent. It was doubtful if the natural mortality of the disease was greater than this. Some observers have reported that its use was not free from danger and had seen death apparently caused by it. Norris had seen it followed by erysipelas. The experience of the majority of observers was that the serum lowered the temperature, but exceptions even to this had been recorded. In judging of the effect of any treatment they must bear in mind the difficulty of prognosis in septic cases, the apparently hopeless sometimes recovering. The conclusions at which he had arrived were—(1) that as usually applied it had no scientific basis; (2) that it had not lowered the mortality of puerperal sepsis; (3) that it usually lowered the temperature and sometimes improved the general condition; and (4) that its use was not free from danger. It was possible that it might prove to be of value in pure streptococcal infection, but that the future must show.

Dr. ARNOLD LEA (Manchester) next read notes of

Two Cases of Puerperal Septicæmia due to Streptococcal Infection.

He pointed out the importance of making a bacteriological examination of cases of puerperal infection when serum-therapy was employed, because although the streptococcus was the organism most frequently found in severe cases numerous other organisms might cause severe or even fatal infection, and at present it was impossible to differentiate the symptoms of the different kinds. In the two cases described the diagnosis was made by means of cover-glass preparations, and cultures of the uterine secretion and of the blood, and further confirmed by microscopic examination of the tissue removed by the curette. In each case the infection occurred during natural labour in healthy women who were attended only by a midwife. In Case 1 a rigor occurred on the second day, the temperature running up to 105·6°, the pulse-rate being 130. On the third day, when seen by himself, the temperature was 105°, the pulse was 140, and the patient was delirious, with profuse diarrhœa and slight abdominal distention; the lochia were abundant and not offensive. Cover-glass preparations and cultures were made of the uterine secretion obtained by Döderlein's tube. A copious saline intra-uterine douche was given but brought nothing away. The uterus was then explored by the finger and except at the placental site the wall was found to be smooth and velvety. The uterus was now thoroughly curetted with the object of removing the whole of the infected mucosa and then swabbed out with 1 in 2000 perchloride of mercury. Iodoform-gauze packing was introduced and left *in situ* for four hours; on removing it the temperature was found to have fallen to 102·8° and the pulse was 116. On the following day there was considerable improvement; by the seventh day the temperature was normal and the patient made an uninterrupted recovery. In Case 2 the patient had a rigor on the third day, the temperature reaching 103°. When seen by Dr. Lea on the seventh day the temperature was 104° and the uterus was large and tender. Under anæsthesia the uterus was explored and some secretion was taken by Döderlein's tube for bacteriological examination. Some clots and shreds of decidua were removed and the uterus was curetted, swabbed, and packed with iodoform gauze, as in the previous case. Slight improvement followed and on the tenth day injections of anti-streptococcal serum were begun and at first appeared to produce marked improvement, but on the twelfth day the patient became much worse and the temperature running up to 109·8° she died on the thirteenth day. In the first case streptococci were found in the uterine secretion and not in the blood; in the second case they were present both in the uterine secretion and in the blood. Dr. Lea believed firmly in the value of local treatment in streptococcal infection of the uterine cavity; the douche was powerless to exercise any good effect, but if seen early the uterus could be disinfected by the use of a sharp curette followed by a strong antiseptic. If lymphatic infection of the muscular wall had occurred there was a possibility of cure by complete extirpation of the uterus per vaginam.

Dr. WHITELOCKE (Oxford) then read notes of

Two Cases of Fever following Delivery

which had recently come under his observation. The first was the case of a woman who was the subject of relapsing appendicitis; she had fever from the first day of the puerperium onwards, the anti-streptococcic serum being employed from the fourth to the tenth day, and each injection caused profuse sweating and fall of temperature. Later an abscess developed over the left sacro-iliac region, but the patient ultimately recovered in about 12 weeks. In the second case also the temperature began to rise on the first day and for six weeks it never fell below 100°; the serum treatment was then begun and was continued for six days when the temperature fell to normal. Nine weeks after delivery an abscess formed in the left shoulder joint, which was opened and irrigated. Ultimately this patient also recovered.

Professor MURDOCH CAMERON (Glasgow) followed. He had no hesitation in saying that the cases recorded by Dr. Whitelocke were not cases of acute septicæmia. Cases of sapræmia and localised conditions of the cellular tissue and tubes, generally recovered under appropriate treatment. Cases of acute septicæmia, however, generally went from bad to worse and he relied chiefly in treating them upon the use of the curette followed by douching with perchloride solution or the application of camphor and carbolic

acid. He had never obtained any satisfactory results from the use of the serum, but had observed serious complications to follow its employment.

Dr. SHAW-MACKENZIE (London) desired to submit for consideration the predisposition to sepsis in child-bed or after operations in syphilitic cases. It was known that women infected with syphilis relapsed during pregnancy or after delivery and showed local lesions which formed foci of streptococcus invasion. The failure of the serum treatment in puerperal fever might be explained by the presence of an untreated syphilitic taint, and the hypodermic injection of mercurial solution might be tried in such cases with beneficial results.

Dr. PURSLOW (Birmingham) said that he had used the serum in about a dozen cases. He doubted whether it would ever be possible to make any authoritative statement or give definite statistics on the value of the serum treatment, for several reasons. Puerperal fever occurred in several forms which differed greatly from one another in severity; the prognosis was always doubtful, for cases presenting symptoms usually regarded as pointing to a fatal termination recovered without treatment. Again, reliance was never placed on serum treatment alone, other means being combined with it, and it was difficult to say which factor was the most important one in the treatment of any particular case. On the whole, he had formed a favourable opinion of the effects of the serum and could state with certainty that he had never observed any unfavourable symptoms, either local or general, after the injections. He never used the curette unless there was a foul discharge and this symptom was often absent in severe cases.

Dr. INGLIS PARSONS (London) thought there were many cases where it was not easy to distinguish between local and general infection. In the former case his practice was to explore and curette the uterus; he then douched the uterus with chinosol solution—1 in 500—and swabbed it out with tincture of iodine. He had never used the serum, but in cases of general septicæmia quinine seemed to him to be beneficial in large doses; if administered by the rectum it was absorbed better and did not disturb the digestive functions. He agreed with Dr. Spencer in disapproving of antipyretics; if the temperature was so high as to threaten life *per se* the cold-bath treatment was the best. He pointed out that serum was an unstable organic compound and there was difficulty in obtaining it in a pure state. Further, before resorting to its use they must be sure that the infection was due to streptococci and not to other forms of microbes, and that they were dealing with a general, and not merely with a local, infection.

Dr. MORR MADDEN (Dublin) said it must never be forgotten that so-called "puerperal fever" was not a distinct form of disease due to a specific infection. If it were, then they might more readily accept the theory of its amenability to a specific serum-therapy. These different forms of disease obviously required different treatment and no one form of antitoxin could be applicable to them all. He believed that no modern method had yet superseded the old-fashioned combination of quinine and grey powder which he had long recommended as the best germicide and antipyretic in these cases. In some cases turpentine acted as a good germicide, reducing temperature and improving the local conditions.

Professor BYERS (Belfast) spoke of the value of abdominal examination instead of vaginal examination during labour as a prophylactic of puerperal fever. As a rule he believed the patient was infected through the uterus and there were two principal types: (*a*) putrid and (*b*) septic endometritis. In the first something was retained in the uterus and there was at times a foul discharge; clearing out the uterus with the finger or curette followed by a mild antiseptic douche and gauze packing were the indications. In the second no local treatment was needed. As to the serum treatment, unless the uterine secretion was examined bacteriologically no scientific value could be placed upon it; if streptococci were present then the serum was indicated; if not, then it was not required. The whole question was in its infancy and it was too early to dogmatise upon the matter.

After further remarks by Major PECK, R.A.M.C., Mr. J. W. DRAPER (Huddersfield), Dr. JOHNSON (Southsea), Dr. KEALY (Gosport), Dr. EDGAR BARNES (Eye), and Mr. J. W. TAYLOR (Birmingham), Dr. SPENCER replied. He first drew attention to the disadvantages attending the use of strong iodine, as recommended by Dr. Inglis Parsons. He had himself used it in three cases, but had become convinced of its danger by having seen high fever ensue apparently from thrombosis produced in the sinuses by the application of the iodine. He had alluded in his address to the advantages of abdominal palpation and had written some papers on the subject, but he did not go so far as those foreign practitioners who had entirely discarded vaginal examination in labour. He should abandon vaginal examination in labour when he had attained to the degree of skill which would enable him to diagnose pelvic contraction, tumour in the small pelvis, and presentation of the cord by abdominal palpation.

Professor MURDOCH CAMERON then read a paper entitled

Rupture of the Uterus at Full Term, Missed Labour, and Delivery Nine Weeks Later.

The patient was a woman who had previously had 10 children, but no trouble occurred in her confinements. She became pregnant for the eleventh time in February, 1897. On Nov. 9th, 1897, labour ensued, in which she was attended by an unqualified assistant. For two weeks labour continued and she was told that the mouth of the womb was of about the size of a crown piece. At the end of two weeks she was seized with severe pain in the left side which lasted for a day or two and was accompanied with great swelling of the abdomen. Labour pains now ceased, but she continued ill and was unable to do anything for several weeks. On Jan. 9th, 1898, after walking about a mile she had a return of bleeding. Another practitioner was now called in who placed her under an anæsthetic and succeeded in delivering the child by version. He could not find the placenta, however, and accidentally discovered that the cavity in which the child was lying was outside the uterus. Professor Cameron, being called in, succeeded in finding the cord and in detaching the placenta from the right iliac region. It must have escaped with the child's body at the time of rupture nine weeks previously. The woman died three days later.

STATE MEDICINE.

WEDNESDAY, AUGUST 2ND.

The proceedings were opened by an address from the President of the section, Dr. GEORGE WILSON (Warwick), an abstract of which we published in THE LANCET of August 5th, p. 379.

A discussion was then opened by Dr. E. SEATON (London) upon

Recent Vaccination Legislation and the Prevention of Small-pox.

Dr. Seaton remarked that the new Act had brought a fresh element of interest into the subject and there was abundant material for discussion by experts and practitioners. Last year he signed the memorial sent to the Government by the Society of Medical Officers of Health. There, while fully recognising the necessity of auxiliary measures, they expressed an emphatic approval of the value of vaccination in prevention. Apart from that point, which for good or for evil had been settled for them by the legislature, there were many considerations that could well be discussed by that meeting. Anything that improved vaccination in respect of its convenience, safety, and efficiency must increase the popularity and consequently add to the value of insurance against small-pox. The President of the Local Government Board evidently viewed the matter in that light and in a speech he referred in terms of high satisfaction to the recent vaccination returns of some districts compared with those of the same districts last year. He believed that the new Act was going to win. Although we could not all agree with Mr. T. W. Russell, M.P., as to the value of substituting different methods for stational and arm-to-arm vaccination yet all obeyed the new departure loyally and would do their best to ensure its success. He then turned to the direct provisions of the General Order of the Local Government Board of Oct. 18th, 1898. As to the remuneration of public vaccinators in some districts results were satisfactory, although it was otherwise in sparsely populated country districts. Fair remuneration in every case was essential to efficiency. The domiciliary visitation that took the place of the new system in spite of its drawbacks had various advantages. The instructions to vaccinators were most important, as they directed how vaccination was to be performed in future. According to modern views these methods would be free from risk. Would

they be quite as efficient as the old methods? Whatever the answer great stress must be laid on the areas of vesiculation and the marks. He would strongly urge the need of trustworthy records and of levelling up the standard of vaccination. Revaccination should be urged wherever possible. Good municipal and county sanitary administration was needed to supplement vaccination. While medical officers of health recognised vaccination as a first line of defence they also insisted on the need for isolation and hospital accommodation. He mentioned the case of a sanitary authority anxious to isolate a case of small-pox. The patient was removed from a common lodging-house to a workhouse where isolation was against official rules. The case was next taken to an ordinary infectious hospital, again against the rules. The authority endeavoured to get a small-pox hospital site, but it was successfully opposed by a single resident within a mile and £10,000 were spent to contest the matter. Any medium-sized town needed the constant supervision of a medical expert. In that respect the sanitary organisation of many fair-sized boroughs was unsatisfactory.

Dr. C. R. DRYSDALE (London) said that it was impossible under any given system of State vaccination to say that it was the best that could be devised. The Germans, however, by compulsory vaccination with animal vaccine of all infants and by compulsory revaccination of these children at the age of 12 years, had got rid of epidemics of small-pox since 1876. In the whole German Empire there were only 197 deaths from small-pox in 1886 and only 188 in 1887 out of a population of 47,000,000. In Austria, without such laws, the small-pox rate per 100,000 of population was 81·41 in 1881; 59·17 in 1883; 57 75 in 1885. In Germany the rate per 100,000 in 1881 was 36·2; in 1883, 1·96; in 1885, 1·40; and in 1886, 0·49. The latest statistics showed that in 1897 there were only five deaths from small-pox in the whole German Empire. He suggested that they might do well to pass a resolution that considering the splendid success that had followed the system of compulsory vaccination and revaccination with animal vaccine in Germany, they advised the adoption of similar methods in the United Kingdom.

Dr. JOSEPH GROVES (Carisbrooke) said that they could scarcely yet judge the new Act. A large increase in the numbers vaccinated had certainly been effected. One public vaccinator in a large city told him that his annual income from that source had increased by £400. The Act dealt astutely with medical men who had been made indignant by the abrogation of a great principle—namely, that the individual will was bound to give way to the common good. The individual may not insist on his will being supreme. The old Radical doctrine held good in that particular case that the greatest good should be done to the greatest number. That the new Act gave the right to certain persons to risk the well-being of the community was undoubted. The Act had so far resulted in great enlightenment to the medical profession, to increased effort, and to a multiplication of vaccinations The public vaccinator had perhaps not been over careful formerly as to the areas of vesiculation and other points. Many persons would not go to the public vaccinator but they preferred their own medical attendants. There was a great difficulty, however, in private practitioners getting a supply of lymph from the Local Government Board, the President of which body had lately declared it impossible to supply such private demands. An authenticated supply of good lymph was an important point in the successful working of the Act. We could not hope to equal Germany until we had compulsory revaccination, without which small-pox could not be ousted. Government broke their pledge on that point. Fees would probably diminish as the arrears of unvaccinated persons were cleared off.

Dr. BRASSEY BRIERLEY (Old Trafford) urged that Government should remove the responsibilities as between public vaccinators and general practitioners. He maintained that both public and private vaccination should be supervised. In one instance he knew a medical man who put up a notice that vaccination could be obtained at the rate of one spot for sixpence, two spots for a shilling, at the discretion of the parents. He suggested that the Government should be asked to bring about more efficient vaccination by private practitioners and to place them as far as possible on the same footing as public vaccinators.

Mr. GARRETT HORDER (Cardiff) agreed that many vaccinations were performed inefficiently in deference to the wishes of friends. He thought that the difficulties of the new Act had been exaggerated. Public vaccinators were now becoming a kind of sanitary inspectors. Personally he had reported a number of insanitary houses. Domiciliary visitation was in many ways a great improvement on the stational method. He had found great difficulty in making out his quarterly vaccination accounts according to the complicated form laid down by the Act, and he advocated some simpler method. He thought that there should be a minimum area of vesiculation fixed. Compulsory vaccination would never be popular, much less revaccination.

Mr. HENRY MAY (Birmingham) wanted to hear the views of private practitioners. The new Act had done good in increasing the number of vaccinations, in adding to the income of vaccinators, and in satisfying the anti-vaccinationists. The only dissatisfaction rested with the private practitioner who found that unless he was prompt the vaccination would be done for him. This rivalry would have to be settled by the profession itself. Private practitioners certainly ought to have the same facilities for obtaining vaccine lymph as those enjoyed by public vaccinators.

Mr. BRINDLEY JAMES (London) thought that every medical man should be entitled to receive a part of the fees dispensed under the new Act. In poor districts some general practitioners came into rivalry with the public vaccinator. He knew one medical man who put up a notice that vaccination would be done free for those who could not afford to pay and small fees would be charged for others. That gentleman always vaccinated in three or four places, but adopted the course described because he felt that he had a grievance. Many poor persons thought that by attending a vaccination station they were to some extent pauperising themselves.

Dr. SEATON, in reply, thought that the most practical point was that dwelt upon by Dr. Groves and the committee of medical officers—namely, the necessity of primary vaccination, and to get the Local Government Board to define what constituted efficient or successful vaccination. The official order stated what should be aimed at, but did not make it clear that one small spot should be regarded as unsuccessful vaccination. He had hoped that the question of organisation would be more fully entered into. He agreed that small-pox could not be combated without revaccination when and where it was most wanted. That could only be secured by notification of initial cases of small-pox and by the vigilance of the medical officers of the infected districts. Those conditions were often unprovided. Furthermore, opportunity for isolation of first cases in an outbreak necessitated hospital provision, as isolation was impossible in the crowded dwellings of the poorer classes.

Mr. COLIN CAMPBELL (Saddleworth) read a paper on

The Technique of Vaccination.

He exhibited a case designed to meet the requirements of the new Act as to aseptic vaccination. A chief feature was that the sides and top of the box were arranged so as to fall open and form trays for instruments and other appliances. In the perfection of technique lay the surest hope of perfecting our results and his main object was to elicit the experiences of other practical workers.

Dr. J. S. HOLDEN (Sudbury) suggested that some latitude should be given to public vaccinators during the summer months in respect to the time allowed after receiving legal notice to vaccinate. During the hot weather his experience had always been that the very best glycerinated calf lymph was uncertain and that the vesicles which followed its application were small and disappointing. He understood that in Germany public vaccination was discontinued altogether during the hot weather.

Dr. DRYSDALE also spoke as to the time taken in the modern aseptic operation.

Mr. COLIN CAMPBELL said, in reply to Dr. Drysdale, that one could hardly complete a single vaccination in the manner directed by the Local Government Board in less than 15 minutes from the moment of opening one's case of instruments. The point was not so much rapidity as fulfilling the official directions. Spirit would not remove thick greasy dirt and no substitute for soap had yet been found. Cotton-wool stuck to the scabs. The sterilisation of rubber instruments could not be effected without boiling. He could not say that calf lymph deteriorated, but he gave instances of variation in results, possibly owing to an unequal distribution of virus. He had not made up his mind that mere keeping injured the lymph if it were kept cool.

Dr. E. PETRONELL MANBY (Liverpool) read a paper on

Meat Inspection and the Abolition of Private Slaughterhouses.

He advocated a system similar to that followed by the Leipsic Town Council, which he detailed. The main condition was the examination by experts of all meat brought into market with full powers for enforcing destruction of unfit carcasses. The examination included the meat of animals slaughtered inside and outside the city. All good meat had to be marked—beef with 12 stamps, veal with six stamps, mutton with eight stamps, and pork with 12 stamps. Good meat but of inferior quality had to be sent to a special establishment, the "Freibank."

The PRESIDENT remarked that the most important practical part of the subject was the question of compensation.

Sir WILLIAM PINK (member of the Portsmouth Town Council) said that the subject was a wide and difficult one. Eight or nine years ago it was brought up in Portsmouth, but was shelved by the local opposition of the butchers. The public should be educated on both sides of the question. Those who protected the private slaughterhouses asserted that control would be fatal to the best supply of home meat. The public would not trust meat coming from a public abattoir. £500 a year were spent in Portsmouth in collecting blood and offal from private slaughterhouses, a point that affected estimates of cost of abolition. The difficulty of regulating private places was less now than formerly. For eight or 10 years no new licences had been issued. He did not propose to compensate butchers but to go into competition with them. Compensation in Portsmouth was out of the question because they were pledged not to raise the existing rate of half-a-crown.

Dr. SYDNEY MARSDEN (Birkenhead) referred to the great amount of evidence brought before Parliament as to the marking of meat. No system could be devised to protect the public. An army of inspectors would be required to mark, say, 1000 carcasses a day, especially as it would have to be done quickly to meet market requirements. As to compensation, if granted to the butcher it must be for something taken away from him and something that caused a distinct loss. However, by providing public abattoirs the butcher would gain greater facilities for turning out meat in good condition and his meat would have an enhanced value that no private slaughterhouse could give. He did not advocate compensation, for which there was actually no ground.

Dr. C. R. DRYSDALE observed that he entirely agreed with Dr. Manby's remarks. The Jews and the Germans had already carried out this plan of having public abattoirs and there could be no reason why we should not follow their example on this point, although doubtless in Germany there was too much militarism which we failed to appreciate. Yet in the case of State compulsory vaccination and public slaughterhouses, as in dog-muzzling, State authoritative methods were greatly superior to so-called individual liberty to do wrong to our neighbours.

Dr. MANBY, in reply, expressed his pleasure in finding the feeling of the section entirely in favour of the closing of private slaughterhouses. He repeated that the aim of the medical profession should be to educate public opinion on the subject. He agreed that compensation should not be paid in all cases, but if a man had done all that he could to satisfy the requirements of the authorities and had spent large sums of money on his slaughterhouse it seemed only fair that he should receive something. He did not agree with Dr. Marsden that the stamping of meat was impracticable. It was done in Germany and why could it not be done in England?

Dr. SYDNEY MARSDEN read a paper on

The Overcrowding in Secondary Schools.

He did not propose to enter into the general subject but rather to point out dangers and to raise points for discussion. The want of power of sanitary authorities in controlling private and other secondary schools was serious, especially in their inability to enforce a sufficient air-space. All sorts of unsuitable rooms were used in private schools and large numbers of children were crowded therein under most insanitary conditions. The resulting symptoms, such as headaches and nervous diseases, were usually attributed to overpressure. Then as to the inspection of drains and sanitary conveniences of schools, if the proprietor objected to inspection—as he did in nine cases out of ten—there was no power to compel him unless chance had given sufficient evidence to warrant an application for a magistrate's order. The mere fact of premises being used as a public school ought, in his opinion, to be reason enough to empower the sanitary authority to inspect. He advocated that medical officers of health should be given the same powers of inspection and control over secondary schools—private and otherwise—with regard to light, air space and ventilation, drainage and so on, as they had over workshops. There was no Act of Parliament that conferred that amount of protection over the young life of the nation from so remediable a danger.

Dr. SIDNEY DAVIES (London) related a case in which isolation in a public school had been badly administered.

Dr. DRYSDALE objected on general grounds to the proposed interference.

Dr. SYDNEY MARSDEN replied and proposed the following motion, which was seconded by Dr. GROVES and carried with one dissentient:—

That it be a recommendation to the Council to urge upon Government the necessity of the sanitary inspection of all schools.

THURSDAY, AUGUST 3RD.

Dr. J. GROVES (Carisbrooke) opened a discussion on

The Personal Communication of Tuberculosis and the Measures available for its Prevention.

He observed that last year the results of a combination of medical men and medical officers of health was not altogether satisfactory. The tendency of the health party was to say that the sanitary authorities should take up that matter and do the main part in checking the disease. He himself took exception to the speech made by the President of that section in regard to the relation of bacteriology and the prevention of phthisis. Sir R. Douglas Powell had advised them to hark back to earlier notions with regard to the disease. At the same time he admitted that it was communicable. It was all very well to say that heredity played a greater part in the question than that assigned to it by modern views. Admitting the greater influence of hereditary predisposition, that should only stimulate us to greater effort. Assuming that tuberculosis was due to a specific poison the more energetic our efforts to exclude that poison from the body the more successful were we likely to be. At present he was not in favour of notification. He instanced a case of chronic phthisis in which compulsory isolation would have inflicted great individual hardship upon a patient. The patient was one of three members of a generation of 150 persons. They associated freely together, but only in those three was phthisis developed, although the facts pointed to a strong family predisposition to the disease in those who were attacked. It was no doubt desirable that medical officers of health should know where the disease existed, but it should be in some way other than that of ordinary infectious notification. In crowded districts especially such knowledge was desirable. He did not advocate the active interference of sanitary authorities. Ventilation was not attended to by medical officers of health as much as it deserved. A clear knowledge of the laws of diffusion of gases might help them to get ventilation without draught.

Dr. NEWSHOLME (Brighton) referred to the remark of the President of that section on the previous day as to the "insane hunt after the tubercle bacillus." If it were insane then all he had to say was worthless because all modern plans for the prevention of phthisis were based on the assumption that the disease was communicable and specific. Dr. Groves had given both sides of the question as regarded notification. No one asked for that measure as in a case of small-pox. There was no intention to use the same rigour. Still, there was no reason, so far as he could see, why a modified system should not be enforced. We were called upon to deal with an infectious disease which although of long duration was one of the easiest to combat, because we were concerned with the sputa alone. The only point to settle was whether we should deal with phthisis early or late—should we wait until the mischief was done and the patient dead or should we commence our attack during the life of the patient? Phthisis in a family might be compared to a city in a state of siege—the population died off if the siege were protracted but the majority escaped if it were short. It had been asked why the medical officer of health should deal with phthisis and not the practitioner. The answer was that the latter was too busy, that it was not his special duty, and that two heads

were better than one. The health officer could also remedy structural defects. He could also study the local incidence of the disease, the most important of infectious diseases. A high authority recently said: "A little reflection would show the impracticability of carrying out such a course of repeated visitation of hundreds and thousands of houses in huge sanitary districts where already it was found impossible for the medical officer of health to visit all the cases now notified." All he could say was that if the medical officer had not time for such work he should get more help given him. A system of voluntary modified notification was in force at Brighton under which he had 56 cases notified during the last six months. Of that number 12 patients died. Those cases which were notified were visited every few months. Precautionary measures were advised and applied to those cases which were, however, only a small proportion of the total number in Brighton. He advocated a system of modified notification at the discretion of the medical attendant and the payment of a notification fee. Visits were to be conditional on the approval of the medical practitioner. There was no reason why such a system should not be adopted forthwith in any district ripe for the change. He would be inclined to make notification compulsory without being penal—that is, there would be no penalty where for special reasons the practitioner failed to notify.

Dr. SEATON (London) feared that he was not educated up to the point of notification. In the compulsory notification of small-pox there were antecedent conditions which altered the case. 15 years ago the prevention of phthisis was an unrecognised thing and its communicability was unsuspected. If notification in lead poisoning were made compulsory as it was under the new Factory Acts, why should not a communicable disease like phthisis be also notified? Dr. Newsholme's recommendations as to a modified notification deserved careful consideration.

Dr. SIDNEY DAVIES (London) emphasised the importance of general hygiene in dealing with this specific communicable disease. In some families certain children were very prone to infectious disease, while others were just as exempt. He condemned the ordinary funnel-shaped cover for the spittoon which should be open. Spittoons generally should be more portable, cheaper, and more readily obtainable. He was inclined to ask for a modification of the Poor-law so as to secure compulsory powers of removal. The medical officer of health of the Royal Arsenal at Woolwich had placed spittoons in the workshops and posted notices forbidding spitting elsewhere. He had also placed spittoons in the arsenal surgery where several hundreds of persons met daily. In his opinion, what was wanted was voluntary notification which would enable them to give advice just where it was wanted. It was no good to distribute papers about the town. Voluntary notification had not so far succeeded, but probably it would do so if fees were paid.

Dr. ALDERSON (Bournemouth) did not agree that notification was more needful in the case of phthisis than in the case of whooping-cough and measles. Cases which were called cured were often merely arrested. The duty of medical men was to educate the friends of patients in the details of general and special prevention.

Mr. KINGSTON BARTON (London) said that leprosy, which had been attributed to the same bacillus as tubercle, was cured without any special treatment and apparently owing to the improved food of the people. Phthisis was no doubt due to the tubercle bacillus, but fresh air and good food were the most important means of stamping out the disease rather than paying attention to the details of killing the bacillus. Hence the authorities who regulated the cubic space of all dwelling- and work-rooms and those who regulated the supply of fresh and pure food should be encouraged to carry out their duties to the utmost.

Dr. G. WILSON (President of the section) said that as a student he was taught that phthisis was communicable to a limited extent. Koch's discovery had not accentuated that position in his mind to any great extent. That was why he had put so much stress in his address on the day before on what he called "a will-o'-the-wisp" bacillus. His ground was that we could deal only with the predisposing conditions of phthisis. He admitted the communicability of the disease and the causative presence of the tubercle bacillus.

Dr. GROVES, in reply, admitted that the sanitary authority should know where cases of phthisis existed. It seemed scarcely fair, however, to interfere with the privacy and liberty of such patients. He agreed with Dr. Newsholme's proposal to pay fees in a system of voluntary notification.

Dr. J. W. H. EYRE (London) read a paper on

The Diphtheria Bacillus in Milk.

Although (he said) in local epidemics the milk-supply had often been implicated from *primâ facie* evidence yet proof of the presence of the specific organism had not been forthcoming. Bowhill recorded one case and another had come under the speaker's notice early this year. The milk was from the supply of a school where a number of cases of diphtheria had occurred. A sample of the milk was centrifugalised, which separated it into three portions—a cream, a separated milk, and a sediment. Microscopical examination showed numerous organisms in the cream and sediment, but none that answered to the diphtheria organisms. Cultures were made in blood serum tubes, 15 from the cream and 15 from the deposit. The resulting growths showed the bacillus diphtheriæ in 14 of the tubes, and more were present in the cream than in the sediment inoculations. The bacilli were of two well-defined types—the one the typical segmented and clubbed form known as the Klebs-Löffler bacillus and the other the type described by Peters as the "short pathogenic," but now more happily known as the "sheath" bacillus. Each of the two varieties was tested for its pathogenicity upon guinea-pigs and also to identify it with the bacillus diphtheriæ.

Dr. W. H. SYMONS (Bath) wished to know if Dr. Eyre had traced the origin of the diphtheria bacillus in the milk. Had he traced it to a human or to a bovine source? The previous history of the milk was often sufficient to enable a medical officer of health to stop a milk-supply. He would also like to know if Dr. Eyre had tried the effect of diluting the milk before centrifugalising. Bacilli had a specific gravity varying from 1035 to 1045 and floated indifferently in milk, urine, and other fluids of similar specific gravity. Dilution lessened the specific gravity of the fluid and so allowed the organisms to be thrown to the bottom away from the fat.

Dr. G. WILSON admitted that the diphtheria bacillus could be communicated by milk and also that if so the diphtheria bacillus would be in the milk. But he wished to remind Dr. Eyre that Dr. Klein had ascribed an epidemic in North London to a bacillus that was not the diphtheria bacillus. With regard to Dr. Eyre's experiments on guinea-pigs he regarded them as useless because the diphtheria was not reproduced in the animal, but only a fatal septicæmia.

Dr. EYRE, in reply, said that the milk was mixed from several farms, and was unboiled before use. He did not dilute before use nor did he dilute before centrifugalising. The inoculation was not intended to reproduce the diphtheria but simply to confirm the diagnosis made by the microscope and by the cultures. No other organisms than the bacillus diphtheriæ will produce in the guinea-pig the same conjunction of spreading gelatinous exudation at the seat of inoculation, peritoneal, pleural, and pericardial effusions, and hæmorrhage into the suprarenals. Therefore by introducing a cultivation of the organism isolated from the milk into the subcutaneous tissues of a guinea-pig a result conforming to those appearances fully confirmed the diagnosis of bacillus diphtheriæ.

Mr. J. B. JAMES (London) read a paper on

Reform in the Coroner's Court.

He criticised the present jury system and advocated its replacement by the coroner and two assessors and a medical man, either the personal attendant of the deceased or the conductor of the necropsy. He would remove the coroner from the jurisdiction of the Lord Chancellor to that of the Registrar-General.

Mr. J. B. JAMES also read a paper on

Death Certification.

He condemned the present form of certificate which did not bind the certifying medical man to state that he had attended the deceased personally. It also made no condition of personal inspection of the corpse and of the absence of suspicious signs. The present death certificate might be a cloak for fraud or might open the door to the nominal burial of a living person. He urged a revision of the law of death certification.

Dr. WYNN WESTCOTT (London) said that it was difficult to apply general statements to coroners as conditions differed so much in town and country. The jury should be maintained for the satisfaction of the outside public who could not be present at the inquest. Mr. James had hit on a blot

with regard to registration. The flaws arose not so much from incompetence as from the conditions under which the certificate was tendered. The medical attendant should always view the body. Until a fee was received for the service no such reform would be possible. The objection that deaths were hushed up arose from the fact that registrars thought the sending of certificates to themselves and not to the coroner sufficiently showed the absence of suspicion. In this way a case might escape investigation.

Dr. F. H. ALDERSON (Bournemouth) urged that crime would diminish if it were rendered obligatory that every corpse should be viewed by a qualified medical man.

Dr. SIDNEY DAVIES (London) said that we were not clear as to the distinction between the disease producing the death and the cause of death. The certificate would be improved if a space were left for the cause of the disease.

Dr. D. WALSH (London) remarked that the x rays now gave exact evidence of death by the definite shadow of the dead or still heart as distinct from the pulsating organ. As a result of an investigation of the literature of the subject he had not found a single case in which the fact of premature burial was scientifically proved.

Mr. F. J. HART (Sydenham) spoke of the difficulty of ascertaining the exact cause of death, and Mr. JAMES replied.

Dr. W. H. SYMONS (Bath) read a paper on

The Disinfection of Articles Usually Injured by Steam.

The goods, he said, were placed in a Washington Lyon's steam disinfector and the process was conducted in the same manner as when "disinfecting with dry heat," but after the first partial vacuum about two ounces of formalin were passed through a rubber tube into the chamber. The jet of formalin was made to strike against a pad of house-flannel and about one ounce of water was also sent in. The cock was closed and 10 minutes were allowed for volatilisation. Air was then admitted. It became saturated with formalin and was allowed to act for a quarter of an hour. After this the chamber was exhausted for 10 minutes, another small charge of formalin was admitted, and the vacuum was broken by warm air. The steam was then turned off from the jacket and the machine was allowed to remain quiescent for at least an hour. The goods were then disinfected and the air was changed two or three times. The odour of formalin could be got rid of by an ounce of ammonia followed by one of water, and the air being again changed. Woollen, fur, leather, and rubber goods might be treated in this way. French polished and varnished woods were blistered if the jacket were heated, but if a by-pass was made for the steam to avoid the jacket and to enter the exhauster direct the operation might be conducted at a normal temperature and the benefits of the prolonged action of formalin obtained. The rapid penetration of formalin was proved by means of long glass tubes hermetically sealed at one end and packed for a foot or more of their length with various materials used in bedding, the sealed end being afterwards opened with proper precautions. Experiments with test organisms were less satisfactory and it was found possible to protect them from the action of the formalin. Broth cultures of typhoid bacilli on paper, wrapped in tinfoil and tightly pressed between the leaves of a book, were not invariably sterilised. Formalin appeared to vary in activity, being easily converted into paraformaldehyde. The process was therefore not equal to steam disinfection, but it might be considered an improvement upon the so-called disinfection by dry heat.

PSYCHOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

Dr. DAVID NICOLSON, C.B., Lord Chancellor's Visitor in Lunacy, delivered the Presidential Address which dealt with the question, Can the Reproachable Differences of Medical Opinion in Lunacy Cases be Obviated? He began by mentioning the case of a woman who was sworn to by two medical men as sane, while two other medical men stated that she was an imbecile and unfit to manage her affairs. On visiting this patient at the request of the judge before whom the case was tried Dr. Nicolson found that the patient was Welsh and was unable to speak a word of English, while he was in the opposite predicament. Dr. Nicolson pointed out that in the estimate of a person's conduct and character prolonged observation was a necessity, and this was more so in the observation and estimate of mental disease. The medico-psychologist, in addition to psychical methods of examination, had also to employ neurological methods of investigation—e.g., examination of the reflexes and sensibility, &c.—before arriving at a diagnosis. An instance was given of a patient who seemed demented and paralytic and who was certified as insane by two physicians. On examining the patient the knee-jerks were found to be normal, while all the physical signs indicated health. Prolonged examination at the asylum resulted in showing that he was malingering and feigning the symptoms of insanity, and two days before his execution (having been convicted of a capital offence) he confessed to having feigned symptoms of insanity. Cases met with in practice might be divided into four classes—viz., (1) ordinary lunacy cases; (2) civil cases; (3) non-capital criminal cases; and (4) capital criminal cases. The question as to how dangerous to self or to others the patient might be and the consequent necessity of sequestration should ever be present in mind, and the physician in examining a case of alleged unsoundness of mind should inquire particularly into the patient's commercial or business ability and to his power of making contracts and of entering upon matrimony, &c. Criminal cases presented the greatest difficulty because malingering was not uncommon amongst them; this rendered diagnosis difficult and it was in cases of this description that medical men differed in their estimates of the patient's mental capacity and responsibility. Nevertheless, the differences of opinion were very often far too great among physicians in their diagnosis and estimate of lunacy cases and the epithet of reproach levelled against the alienist—that his testimony could be bought with the golden guinea—was not to be wondered at. Often it appeared, however, that such difference could be traced to inexperience, to insufficient care in the examination of the patient, or to prejudice. All medical men who took upon themselves to sign lunacy certificates should possess a special practical knowledge and training in the study of mental disease and in asylum experience as regards the diagnosis, care, and treatment of insanity. Lack of knowledge on the part of general practitioners was in a measure responsible for the prevalence in the community of insane and preventable cases possessed of suicidal or homicidal impulses roaming at large undetected and unrestrained. The physician in arriving at an opinion on cases of mental unsoundness should in no wise allow abstract theories to influence his mind. He referred to such theories as the following: (1) that capital punishment was wrong; (2) that all murderers were *ipso facto* insane; and (3) that drunken persons were not responsible for their deeds. Too much stress was not to be laid on cranial and facial measurements. Personal examination of the patient and a full inquiry into his history was most important, and such examination ought to be repeated on different occasions if necessary before an opinion was given. Cases of delusional monomania were especially found to require repeated examination before conclusions could be formed. And in every case the physician should not allow sentiment and the prejudice of relatives to influence his decision, which should be only given according to all the facts known or ascertained. Should practitioners allow such considerations as the above full weight in their observations of cases of mental unsoundness he was sure that the differences of opinion amongst them would be less marked and less reproachable.

Dr. J. F. SUTHERLAND, Deputy Commissioner in Lunacy for Scotland, read a paper on

The Urgency of Legislation for the Well-to-do Inebriate.

The Inebriates Act, he said, brought forward last year (1898) applied for the first time to the drunkard who fell into the hands of the police and was convicted before the proper authorities of drunkenness. This, unfortunately, could but seldom be applied to the well-to-do inebriate whose acts were shut up within the precincts of his home and family circle. That many of the well-to-do inebriates did not fall into the hands of the police for incapacity or disorderly conduct was due to the mere accident of circumstances. Sanitary, lunacy, and criminal laws did not stop at one class but applied to all. The necessary complement of the Act of last year would be an Act to deal compulsorily with the well-to-do inebriate. Of course, the vast number of well-to-do inebriates would never

voluntarily submit either to the deprivation of the control of their affairs or to lengthened compulsory detention in retreats or reformatories. But provision might be made which would admit of something in the nature of a *conseil de famille* being duly empowered by the court to manage his affairs as a first step and for a certain time. Should this prove insufficient the court might order the detention of the patient in a certified reformatory. Dr. Sutherland estimated the number of chronic inebriates whose case and condition called for interference in the manner proposed as approximately 10,000 in England and 2000 in Scotland. Instances of such individuals were to be met with in every parish. Their habits of inebriety were notorious and they were well known to members of the medical profession, whether psychiatrists or not. The application of compulsion would have the effect of inducing many to enter retreats voluntarily who would otherwise refuse to do so. Flogging or corporal punishment should form no part of the treatment of habitual drunkards; it degraded and made them worse. There was an apparent inconsistency in the law which pounced upon the habitual drunkard who was guilty of beating his wife and children and committed him to a retreat, while it hesitated to restrain or to schedule for compulsory seclusion the inebriate who broke their hearts and harried their home by years of dissipation. It was frequently said by scoffers that the compulsion of drunkards was an attempt to make people sober by Act of Parliament. And why not? That was exactly what, *mutatis mutandis*, the Ten Commandments were meant to do. In conclusion Dr. Sutherland moved a resolution requesting that the question be brought before the consideration of the Council of the British Medical Association.

In the discussion which followed

Dr. SEYMOUR TUKE (London) advocated that some provision like a *conseil de famille* or its equivalent should be made for dealing with such cases. Evidence on oath ought to be allowed, as in a Chancery inquiry, before disposing of the property of the alleged drunkard.

Mr. BRISCOE (Alton, Hants) said that the liquor laws for stopping brewers and retail sellers from supplying intoxicants to the alcoholic should be made more stringent. The lash should be applied to brewers rather than to drunkards.

Dr. LLOYD ANDRIEZEN (London) pointed out that measures to reach and apprehend the drunkard in his home and private life would have to be too inquisitorial—a method not likely to commend itself to legislators and sociologists. General practitioners had the best opportunities of influencing inebriates for good and of pointing out the evils, since they often stood in a confidential position in the estimation of the family. The Act of 1898 contemplated detention in a reformatory or retreat only in cases of persons convicted before a magistrate or other proper authority and it would be an advantage if its provisions could be extended so as to reach with greater facility the well-to-do inebriate who under existing circumstances seldom came within its scope. The subject, however, was a very delicate and difficult one, requiring great caution and thorough knowledge. Every regard should be paid to avoid anything like an invasion of home and private life at all approaching the methods of the inquisition. Proposals regarding laying the lash either on drunkards or on sellers of wines and liquors—who, after all, pursued a legitimate trade—were violent and reprehensible and at the same time harsh and impractical. They served to light up the spirit of fanaticism and to inflame differences which retarded instead of helping legislation.

Dr. BOWER (London) referred to constantly recurring cases seen in general practice for whom under the present provisions of the law little could be done.

Mr. MANNING (Salisbury) questioned if the lash was seriously contemplated by anyone.

Dr. SMALLEY (London) said that the Government measures had been rather unfairly criticised. The subject was a most complex one and had to be dealt with cautiously. The Act of 1898 was by no means a dead letter and if patience were exercised probably some institution would soon be available for the class of drunkards under discussion.

Dr. FLETCHER BEACH (Kingston Hill) deplored the condition of drunkenness in private life and thought it would be well to have definite and fuller data upon the question. He was of opinion (*a*) that some resolution should be passed by this Section regarding the question of further legislation for inebriates and sent to the Council of the British Medical Association with a request that it be circulated among the various branches of the Association; and (*b*) that the report received on the subject be discussed at the meeting next year.

A motion embodying the request (*a*) above mentioned was then proposed and put to the meeting by the PRESIDENT and unanimously carried.

Dr. G. ARCHDALL REID (Southsea) read a paper on

Alcoholism in its Relation to Heredity.

While concurring in the dictum that drunkenness was a terrible thing, it was urged that it was as yet unproved that parental intemperance afflicted the offspring in such wise as to produce in them an increased craving for drink, not to mention such effects as insanity and epilepsy. It was true that the offspring of drunkards were sometimes epileptic or insane and very often of intemperate habits, but to attribute these evils to the influence of parental indulgence acting through heredity was to confuse *post hoc* with *propter hoc*. Every drunkard had in his nature a marked capacity for enjoying alcohol and in addition to this a keen memory of the delights conferred by previous acts of drinking. This primary capacity for enjoying alcohol was an inborn factor and thus, in harmony with the teachings of biological theory, it might be transmitted. The other element, however—viz, the keen memory of the delights conferred by acts of drinking—was a later trait, an acquired character, and this could not be transmitted to the offspring of the drunkard. The question of the transmission of acquired traits had been one of the burning questions of the age and though the whole plant and animal worlds had been ransacked yet no single instance of the transmission of acquired characters had been proved. *A priori*, therefore, it was most unlikely that the acquired effects of alcoholism—in the forms manifested to us in drunkards—were transmitted to the offspring. Men differed very much from one another in the depth or intensity of their craving for drink. Some men were abstainers or were temperate because their innate desire for drink was small or practically *nil*. Others, *per contra*, relished drink so greatly and craved it so greedily because having once had experience of it a very intense pleasure was felt and strong desire experienced. It was from the ranks of the latter that the army of drunkards was recruited. Between these two extremes were all shades of drinkers. As individuals thus differed so did nations and races. The Jews and Southern Europeans generally were very temperate, while the Northern European races were much less temperate. Races and nations craved for alcohol in inverse proportion to their past familiarity with it. Present-day savages, such as those of America, Australia, and Polynesia, who had never manufactured alcohol (as history shows) even in dilute form, delighted so intensely in this novel drink that, given the opportunity, they drank to extinction. Other savages, such as those of Africa, who had been able to manufacture alcohol in dilute solutions and in limited quantities, though more intemperate and less able to resist drink than Europeans, were much less prone to such extreme intemperance than the savages of North America. These facts established the conclusion that the inclination to alcoholic excess was for a given race in inverse proportion to the past racial experience of alcohol. The race that had been longest familiar with alcohol was generally found to be the most temperate. This showed that the effects of intemperance as acquired by ancestors were not transmissible, for were it the case then the constant accumulation of such effects generation after generation would render the race that had longest used drink the most inclined to drunkenness. As regarded epilepsy and insanity it was argued that these might appear in the progeny of non-inebriates as of inebriates; and if it be further objected that the offspring of inebriates were thus afflicted in higher proportion it was retorted that it was precisely from those having a primary tendency to epilepsy that one would expect tendencies towards inebriety. The tendency to epilepsy, however, might not manifest itself as such though in the children it might appear as distinct epilepsy. The drunkenness of the parent would mask his epileptic tendency which, however, might re-appear in the child in more obvious fashion and without inebriety being the causal element in determining epilepsy in the offspring. The temperance reformer's plan of abolishing drink was not the true method of reform. Were such a procedure to come into force for a time the result would be that the race now removed from alcoholic selection would revert to the ancestral type in which the tendency to excessive drink was greater, and directly the opportunity recurred would drink almost to

extinction, like savage man unacquainted in the past with alcohol. Nature's plan had, on the other hand, brought about the result that all communities which were anciently given to drink were now relatively sober and that in proportion to their past sufferings from drink. Were alcohol withheld some other stimulant or narcotic, such as opium, would take its place—as was shown in the present history of certain Eastern nations.

Dr. LLOYD ANDRIEZEN (London) could not accept many of the *à priori* arguments and analogies put forward. It was difficult to grasp the significance of the term "hereditary transmission" without a clear and correct conception of the mechanism of heredity. The ovum or spermatozoon might be poisoned by alcohol circulating in the blood during intoxication and were sexual intercourse at this stage followed by conception it would result in the production of a fertilised ovum damaged more or less by the influence of alcohol. Persons of comparatively sober habits might occasionally at rare intervals—e.g., on the occasion of a wedding or other festivity—take more alcohol than was good for them, and an embrace given in a moment of temporary drunkenness might thus prove prejudicial to the offspring begotten under such circumstances. Among the lower classes and peasantry in this and in other countries it would be found that a relative degree of intoxication of the bridegroom on the wedding evening—as contrasted with the relative sobriety of the bride—is not very uncommon. In such cases the offspring begotten as the result of conception taking place during the first 24 hours of married life would suffer. Many cases have been collected by observers of the French and German school especially illustrating these statements. The experiments of Dr. Fere on the pathological influences of the vapours of alcohol and of absinthe on hens' eggs hatched in incubators—in every case with control specimens hatched in other incubators without being subjected to such toxic agencies—show conclusively a large percentage of abnormalities in the chickens hatched under the influence of alcohol, and which might appear in the form of deformities, monstrosities of body, and feebleness and lack of intelligence and of instinct (conditions comparable to the idiocies and imbecilities in children), while a large proportion would be found dead or still-born. Such percentages were augmented under the influence of absinthe. Eggs hatched under normal conditions did not present anything approaching the above condition of abnormalities. The subjects of hereditary drink craving were often the children of alcoholic or other neuropathic parentage. Persons who were by habit and nature sober and occasionally—as in the special events of weddings, festivities, &c., above alluded to—got intoxicated have been known to beget under such circumstances children with feeble intellectual and moral powers, idiots, and imbeciles, and others affected with tics, impulses, and abnormal cravings, whereas other children begotten by them under ordinary conditions appear to be normal. Many such examples of offspring presenting in one and the same family healthy and abnormal children were on record and were well known to alienists. The offspring of absinthe drinkers were peculiarly prone to epilepsy, as Magnan and others have shown. Dr. Andriezen had personally investigated for several years the histories of alcoholic families, members (antecedents or descendants) of which had found their way to asylums; and from a careful study of over 120 families (selected from a much larger number of cases investigated) was led to conclude that the following were the more frequent results of alcoholic parentage showing its expression in the offspring, viz.: (1) imbecility and weak-mindedness; (2) infantile convulsions and meningitis; (3) a large proportion of still-births; and (4) brutal degradation and incapacity in the children, with tics and impulses, including hereditary drink-craving. These and other points had been already put forth in a paper read by Dr. Andriezen at the Neurological Society of London in April, 1895, and the evidence of further cases under his care and observation since then had served to confirm his views then expressed. The inebriate as a result of his habits transmitted to the offspring a damaged or diseased germ (ovum and spermatozoon), and even the most healthy married couple could from temporary intoxication do the same and beget a child which might exhibit one or other of the abnormalities above mentioned.

Dr. J. F. SUTHERLAND (Edinburgh) pointed out that Dr. Reid's views were opposed to the Scriptural view of heredity—itself the embodiment in all probability of a nation's experience—expressed in the words "the fathers have eaten sour grapes and the children's teeth are set on edge." The inebriate transmitted to his offspring an unstable and abnormal nervous system which made it liable to alcoholic excess as to other obsessions and cravings. The experiments of Magnan referred to by Dr. Andriezen in explaining the causation of epilepsy showed that the active principles were furfurol and other deleterious ingredients, but alcohol of the purest kind in excess produced a condition almost identical with epileptic seizures.

Mr. J. F. BRISCOE (Alton) did not believe in the transmission of drunkenness from parents to children. In the case of the experiments of Dr. Fere referred to he would like to know the family history of the eggs—e.g., whether there was in-breeding in the parents—to account for the presence of deformity in the chickens hatched.

Dr. SEYMOUR TUKE insisted on the fact that inebriety in the parents resulted in damage to all the tissues of the body—some more than others—and must affect the ovum or the fœtus according to the period when drinking began. The drunkard transmitted to his offspring a diseased inheritance and one result of this appeared to be hereditary drink crave.

Dr. FLETCHER BEACH emphasised the fact that imbecility and even idiocy resulted in the children from parental intemperance and referred to his past experiences at Darenth Asylum bearing out this view. The effect of alcohol reaching the ovum and germ elements by the circulation could not for a moment be doubted, and the experiments of Dr. Fere on eggs subjected to the vapour of alcohol was another proof of the view reached long before by alienists of the deleterious effects of this poison on the offspring of alcoholic fathers and mothers.

The PRESIDENT of the section summed up the discussion, referring to the special fact of some form of nervous or mental instability being transmitted to the children of alcoholic subjects, and stated that the evidence of facts in this direction in the field of mental disease was overwhelming.

PATHOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address.

Dr. J. F. PAYNE, the President of the section, took as the theme of his address the following important question:

The Local Diseases produced by General Specific Toxins.

He began by drawing attention to the change which was now rapidly passing over the science of medicine as regards the subject of etiology. This, he said, received very striking illustration in the first of the topics chosen for discussion in that section—viz., infective endocarditis. This was one of the diseases now recognised as due to the action of bacteria. Whether the attack occurred in a previously healthy person or whether it supervened on a chronic condition already existing it was clear that there was a new factor of disease entering the body from without which, besides producing some general changes, definitely injured a certain part. When this happened it was customary to call the injury inflammation and to give to the malady some name ending in "itis." Hence the disease in this instance is called "endocarditis." But that is not all. That name merely implied an injured condition and the question was what caused the injury? In answering this question the true or ultimate cause of any phenomenon could never be fully known for it included a vast and indefinable series of factors. He meant the proximate cause or that which was considered to be the most important. But even in this limited sense the causes of disease were very numerous. They might be internal, such as wear-and-tear, chronic degenerations, intoxications, or mutual reaction of organs, and so forth; or they might be external causes, such as physical influences; or finally, they might be what are called specific causes, injuries which met their victim casually, as it were, like a bullet which struck a person haphazard in battle. It was these specific causes which would merit some consideration. A great deal was heard about the specific causes of general diseases, but it should be remembered that they might also give rise to diseases which appeared to be purely local. Every year brought fresh instances of maladies being referred to specific causes. Some of these were formerly regarded as dyscrasiæ or humoral diseases, dependent on some change in the blood. Others were regarded as simple inflammations to distinguish them from general diseases. Erysipelas was one of these; though it was

even yet regarded by some as a simple inflammation of the skin. But there was no reasonable doubt but that it was due to a distinct microbe or streptococcus. Pneumonia was another; though not very long ago it was regarded as one of the most typically "local" diseases. Meningitis, again, had ceased to be a simple expression. Even apart from tubercle we had septic, diplococcal, pneumococcal, and perhaps other kinds of meningitis. In short, it was becoming a question whether every organ had its simple inflammation described by a name ending in *itis*. It was true that diseases produced by injury of the surface still presented a considerable uniformity of type. Peritonitis, whether produced by the bacillus coli, by streptococcus or staphylococcus, by a combination of microbes or by injury, still, apart from tubercle, appeared to be the same disease. But they now saw that injury produced peritonitis only by allowing the peritoneum to be invaded by organisms, either by an external wound or by some change which permitted the intestinal wall to be permeable to microbes from adjoining parts. The assumption of a simple idiopathic or rheumatic peritonitis became every day more difficult and most physicians agreed that they could not recall any case in which the absence of a distinct specific cause could be definitely proved. Another class of diseases which was now transferred to the specific class consisted of those which were formerly regarded as affections of some physiological system and were treated as functional disturbances of the part. Tetanus, which was formerly regarded as a functional disturbance of the nervous system, was a typical example. Hydrophobia was another. The classical example of tubercle was too well known to need more than a passing reference. It should be remembered that this change in modern medicine was not wholly due to the discovery of bacteria as living pathogenic agents. Mr. Poland long ago propounded the view that tetanus was an infective disorder, and Skoda 40 years ago initiated the idea that pneumonia might be a specific infection and not a mere inflammation of the lungs. Sydenham also regarded pneumonia and pleurisy, which were not then clearly differentiated, as maladies comparable to other fevers such as small-pox and scarlet fever, originating in "a proper and specific inflammation of the blood" which deposited matters on the pleura (or lung). Sydenham believed in specific diseases and regarded them as species resembling the species of plants. It was, however, only now that we had a certain basis for this belief and it considerably modified our conception of diseases in general and especially as regards their names and definitions. Another change which had modified their notions of disease was the increasing number of local affections which were now known to be part of a general condition. In the case of syphilitic and rheumatic lesions this had long been admitted; but with other morbid conditions the principle obtained. In the present day the term "endocarditis," for instance, had no meaning without some kind of adjective, such as "rheumatic" or "infective" (malignant) placed before it, by which they meant that it was part of a general rheumatic or else a septic condition. There was no such thing as simple endocarditis unless perhaps in the case of mechanical injury. The same lines of argument applied to joint inflammation—synovitis and arthritis—of which there were rheumatic, pyæmic, gouty, gonorrhœal, tuberculous, and other forms. This reference of a local lesion to a general process was no doubt sometimes liable to abuse, particularly in the application of the term "gouty." The difficulty of ascertaining examples of simple or non-specific inflammation is illustrated again by such diseases as hepatitis, nephritis, and enteritis. This difficulty, Dr. Payne went on to remark, of ascertaining what is a simple or non-specific inflammation caused them to wonder whether they were correct in retaining the term "inflammation" in our pathological vocabulary. Thoma would exclude the word altogether on three grounds: (1) because there was no prospect of an agreement as to the definition of inflammation; (2) because our present conception of the process was vague and uncertain and was often identical with the conception of local disease; and (3) because the use of the word "inflammation" introduced into the conception of many diseases, considerations and factors which did not proceed directly from observation but were theoretical and born of analogy. In studying inflammation investigators had proceeded in one of two directions. Either they had fixed upon one of the phenomena observed in what was called an inflamed part and exalted that into the essential feature of the process, or else they had started with the assumption that inflammation implied injury, and hence the well-known definition that "inflammation" meant the changes produced in a part by injury provided that the injury fell short of actual destruction. But neither of these lines was satisfactory, for in the first-named direction how were they to know that one feature was more essential than another? and in the second case, if inflammation depended on the consequences of injury how did it differ from injury? Practically this difficulty was met by saying that inflammation was injury followed by the process of repair. But, again, supposing repair was delayed, then they might have defence only, and the processes which the surgeons observed in an injured—i.e., an inflamed—part they now knew to be due to the introduction of a second injury in the shape of bacteria. In conclusion, it was submitted that the conception of inflammation as a complication of injury was merely a tradition, a preconceived idea which influenced our minds consciously or unconsciously. If the word "inflammation" had never been introduced and we had had to study injury, defence, and repair by modern methods without preconceived ideas, the term would be found to be quite unnecessary. The conception of injury, reaction of the organism, and repair, would cover the whole ground. In modern pathology the word "inflammation" is certainly a possible source of fallacy and confusion; and it would at any rate be a salutary and useful experiment to try to do without it for a few years.

Dr. J. W. WASHBOURN (London) opened a discussion upon

Infective Endocarditis.

He described the structure of the endocardium, pointing out its similarity to the interior of the blood-vessels and stating that its pathology was identical. The absence of blood-vessels in the healthy valves precluded the conveyance of bacteria to them through these channels, but in valves the subjects of old disease vessels were present and were sometimes found plugged with bacteria in cases where an infective endocarditis was engrafted upon an old endocarditis. The endothelial cells of the vessels acted as phagocytes englobing bacteria present in the circulating blood and he claimed a similar function for the endothelium of the endocardium. Infective endocarditis was an inflammation of the endocardium produced by living bacteria. Similar anatomical lesions might be caused by other agencies, so that an anatomical classification was impossible. Infective endocarditis was not a pathological entity as it might be caused by several distinct species of bacteria. He thought that in the future such expressions as "streptococcal infection with endocarditis" would be substituted for the term "infective endocarditis" in order to show that the endocarditis was not an essential factor in the disease. He described the changes in the endocardium arising from bacterial infection. First, necrosis of the endothelial cells, then thrombosis, and ultimately infiltration with leucocytes and proliferated connective tissue cells. The necrosis might be excessive and cause infiltration, and this might cause perforation of the valves and rupture of the chordæ tendineæ. Dr. Washbourn quoted Welch as showing that the lesions in some cases of acute arterial and acute venous thrombosis were essentially identical with those of infective endocarditis, and he stated that these three conditions should be classified together. He gave statistics of 100 fatal cases at Guy's Hospital to show the frequency with which the different parts of the heart were affected in infective endocarditis, and compared these with Professor Osler's statistics. He pointed out that the frequency of left-sided infective endocarditis was due to several factors, one being the predisposition of infective endocarditis to become engrafted on old valvular mischief, which almost invariably was situated on the left side. The mode of conveyance of bacteria to the heart was shown to have a bearing upon the part affected. The various primary lesions from which the endocarditis started were mentioned and statistics were quoted. The lesions consequent upon infective endocarditis were enumerated and classified. The streptococcus pyogenes, the pneumococcus, and the staphylococcus aureus were the most frequent causes of infective endocarditis, and less frequently other bacteria—such as the gonococcus, the tubercle bacillus, the typhoid bacillus, &c.—all of which were discussed. Dr. Washbourn considered the methods by which the nature of the bacteria causing the endocarditis could be discovered during life. The primary lesion might be of considerable assistance—for instance, an endocarditis following upon

pneumonia was generally due to the pneumococcus, but a secondary invasion might arise and then a different bacterium to that in the primary lesion might be the cause of the endocarditis. The experimental production of endocarditis was considered. With many bacteria endocarditis could be produced by injection into the circulation, especially if the valves were previously injured, but this was not an essential factor. In conclusion, Dr. Washbourn urged the necessity of making bacteriological investigations as a routine in all post-mortem examinations.

Mr. ALEXANDER FOULERTON (London) agreed with Dr. Washbourn in his objection to the use of the term "infective endocarditis." The term "infective" should only be used when they were ignorant of the nature of the infecting bacteria; when known the species of the bacteria should be expressed and the lesion described as streptococcal or pneumococcal endocarditis, and so on. As to the conditions predisposing to bacterial disease of the endocardium they had still very much to learn. It appeared to him that more stress had been laid upon previous valve disease than the known facts warranted. If the occurrence of an "infective" or "ulcerative" endocarditis were markedly favoured by a pre-existing and more chronic valve lesion then they would expect to find that the incidence of the former lesions would have some relation to the incidence of the latter, but this was not the case. He had taken some statistics of endocardial lesions from the reports of the Middlesex Hospital and the St. Bartholomew's Hospital. He found that in 504 cases of "simple" or "chronic" valve disease 260 occurred among males and 244 among females, the excess in the case of males being due to a large proportion of aortic valve disease. But in 70 cases of "ulcerative" endocarditis 54 occurred among males and only 16 among females. The relative proportions obtaining in the combined statistics held good also for the separate figures from each hospital. With regard to disease of the right and left heart respectively there was again a marked discrepancy in the incidence of "infective" or "ulcerative" and "simple" or "chronic" valve disease. Extensive statistics showed that in the latter the right heart is affected in a proportion of not more than 3 per cent. of all cases. But in "ulcerative" endocarditis the proportion of right heart cases is much higher. Thayer and Lazear in their collection of 31 cases of "gonorrhœal" endocarditis found that the right heart was affected in more than 25 per cent., and other statistics appeared to point in the same direction. He quite allowed that there was a possible fallacy affecting the statistics—viz., that at present they could not say what proportion of the cases returned as "simple" or "chronic" endocarditis might not be caused by bacterial infection. In severe cases of infective endocarditis the patients died and were correctly registered, but it must be supposed that there were many cases of bacterial endocarditis of a lower grade of clinical severity in which the patients survived and appeared later in the returns of the pathologist as cases of simple or non-infective valve disease. Another factor which had an obvious bearing on this aspect of the matter was the relative liability to bacterial infection in the two sexes, and the influence of gonorrhœal disease could not be ignored when considering the sex incidence of infective lesions of this sort. The proportionately much greater liability of the right heart to infective than to simple endocarditis when compared with the left heart might perhaps be accounted for partly by the following facts. Bacteria usually gained an entrance into the system on the venous side of the circulation, and it was in these cases that septic thrombosis more commonly occurred. It was frequently noticed in the course of experimental work that there was a marked tendency for bacteria introduced into the circulation to be arrested in the lungs, and the same thing might occur under the conditions of a natural infection. Also any particles of infected matter, such as portions of septic thrombi, larger than individual bacteria would be strained off in the pulmonary circulation. In these ways, therefore, the left heart was better protected from infection than the right, and so the discrepancy might be partly accounted for. In going through the statistics of the Middlesex Hospital a small series of cases had been met with which might be specially mentioned. Six cases in all were recorded of patients over 15 years of age in whom a deficiency in the inter-ventricular septum existed. In one of these six cases all of the valves were free from any sign of disease, in four cases there was definite ulcerative endocarditis, and in the remaining case the tricuspid valve showed recent vegetations. In all the five cases showing signs of infective endocarditis the right heart was affected. One of these specimens, from a man aged 21 years, he was, by permission of Dr. Campbell Thomson, pathologist to the Middlesex Hospital, able to show. The pulmonary and tricuspid valves showed numerous exuberant granulations, but the valves of the left heart were free from signs of disease. There was a considerable congenital deficiency in the upper part of the inter-ventricular septum and there were other abnormalities in connexion with the commencement of the aorta and pulmonary artery. He had examined the blood in this case 24 hours before death, but no evidence of the presence of bacteria was obtained. After death very numerous streptococci were found in the granulations on the valves. In another case which he had recently examined, that of a young woman with a streptococcal endocarditis and a secondary aneurysm in the calf of the leg, a culture of streptococcus pyogenes was obtained from the blood on one occasion, but two subsequent examinations, one made 48 hours after the first and another after a further interval of several weeks, gave negative results. After death extensive valve disease was found. And, indeed, it seemed to be generally agreed that examination of the blood during life gave positive results in only a very small proportion of these cases. With regard to gonorrhœal cases he had come to the conclusion that a true gonococcal endocarditis had very rarely been proved bacteriologically. He accepted the cases of septicæmia with gonococcal valve disease recorded by Thayer and Blumer, by Thayer and Lazear, and a few others. But it was misleading to describe as gonococcal the large number of cases in which an endocarditis had occurred in the course of gonorrhœa. Gonorrhœa was a disease in which secondary infections were the rule, and without a very careful bacteriological examination it was impossible to say in which of the cases the endocarditis was due to the gonococcus and in which of them it was due to other bacteria which had caused a secondary infection.

Dr. J. H. BRYANT (London) had had the opportunity of performing necropsies on a large number of cases of infective endocarditis in the post-mortem room at Guy's Hospital. In his remarks, however, he would, he said, confine himself chiefly to a description of the technique of his method for obtaining bacteria in the post-mortem room for subsequent bacteriological examination. As Dr. Washbourn had already pointed out, no proper or reliable bacteriological examination could possibly be carried out unless the greatest care were exercised in obtaining the vegetations free from the possibility of accidental contamination. The scientific investigation of this disease had hitherto been much hampered by the careless and slipshod manner in which the specimens had been obtained for the bacteriologist. He had found the following method eminently satisfactory and reliable and if conducted with careful attention to detail vegetations could be obtained from any of the valves without fear of extraneous contamination. The requisites were a small packing needle threaded with fairly thick string, dissecting forceps, scalpels, searing irons, and sterile glass capsules. An assistant was indispensable. The needle, string, and instruments should be sterilised and the irons heated. The thoracic viscera should be exposed in the usual manner without opening the pericardial sac. The outer anterior surface of the pericardial sac should be seared, the opening should be made with sterilised scissors, and cultures should be made if there were any signs of pericarditis. Then the pericardial sac should be opened more freely so as to fully expose the heart. The apex of the left ventricle should be seared both on the anterior and posterior surfaces. The needle should be taken up with a pair of sterilised forceps and the ends of the string should be taken up with another pair of sterilised forceps. The assistant should hold this last mentioned pair in such a manner that the string would not come into contact with the body or any other object. The needle should be passed through the apex of the left ventricle about half or three quarters of an inch above its extremity and the string should be drawn through for half of its length. Then the assistant should be directed to hold the free end and the needle end of the string together. By this means perfect control of the heart could be obtained and it could be firmly held in any position desired by means of appropriate traction on the string so that the anterior, posterior, or lateral surfaces of the heart could be exposed

as was desired. At this stage of the proceedings it was of importance to have some idea of the valve involved as this knowledge might save much unnecessary trouble. Suppose, for example, the physical signs during life pointed to the mitral valve the assistant should be directed to pull the heart over to the right by means of the string as far as possible, and to slightly rotate it on its long axis in order to expose the left side and part of the posterior surface. Then with the heated irons a large area over the left auricle and ventricle should be carefully and thoroughly seared and a deep longitudinal vertical incision should be made through the left auricle and ventricle, the mitral valve cut through, and the cavities of the left auricle and ventricle opened. If the cavities were filled with blood-clot the clot should be picked out with sterilised forceps. It would then be possible to ascertain if there were any vegetations on the mitral valve; if they were present a piece should be snipped off with sterilised scissors and carefully transferred on the scissors to a sterilised glass capsule. The cover of the capsule should not be raised more than was absolutely necessary and it should be done as quickly as possible. The capsule could then be taken to the bacteriological laboratory and the piece or pieces of vegetation which it contained should be divided by means of sterilised scissors into four parts. Two broth cultures should be made, two of the pieces being very carefully placed in the broth and all precautions being taken to prevent contamination. This method of making the cultures was suggested by Mr. Pakes. One broth culture should be grown under aerobic and the other under anaerobic conditions. Agar, blood serum, and gelatin slants might be inoculated from a third piece, and the fourth portion should be used for making cover-glass preparations. If the aortic or pulmonary valves were known to be affected the assistant should pull the heart downwards, and the base of the heart, the aorta, and pulmonary artery should be carefully seared. The aorta or pulmonary artery should then be opened by a vertical longitudinal incision and after removal of the blood-clot the vegetations might be obtained as from the mitral valve. If the tricuspid valve were affected the heart should be pulled over to the left and slightly rotated. The method of procedure was then similar to that described for the mitral valve. If there were no indications of any particular valve being affected all the valves should be separately and carefully examined *in situ* as above described. If an examination of the blood were required the anterior surface of the right and left auricles or ventricles should be seared. Then a sterilised pipette drawn out to a fine point at one end and sealed, but plugged with sterilised cotton wool at the other end, should be taken, the sealed end should be snipped off with sterilised scissors, and the pipette pushed through the wall of either ventricle or auricle. Some blood should be sucked into it, the pipette withdrawn, the blood sucked a little higher into it and the tube should be sealed by holding the pointed end in the flame of a spirit lamp or Bunsen burner. The pipette would then contain blood quite free from any accidental contamination and could be removed to the laboratory for bacteriological examination. The use of this pipette was suggested by Mr. Pakes. In three of his cases Dr. Bryant had obtained pure cultures of the streptococcus pyogenes, and this micro-organism only was seen on histological examination of the cover-glass preparations In one case he found the streptococcus pyogenes associated with a bacillus which had the property of very rapidly liquefying gelatin, and which also produced gas very freely in gelatin shake cultures. In another case he found the streptococcus pyogenes associated with an anaerobic bacillus which could be cultivated on agar, blood serum, and broth at 37° C., but which could not be cultivated on gelatin at 20°C. He had not yet fully worked out or identified these two bacilli, but he considered them of sufficient interest to be mentioned. His experience with regard to cases of rheumatism did not coincide with that of Dr. Lazarus-Barlow and Dr. Bertram Abrahams. He had investigated one case of rheumatic endocarditis and two cases of rheumatic pericarditis and in all three his results were negative, the cultures all being sterile and no organism being detected on microscopical examination. His other cases had been worked out by Mr. Pakes. Several allusions having been made to gonorrhœal infective endocarditis Dr. Bryant showed a specimen from the Guy's Hospital museum. The patient in this case was a man, aged 19 years, who was admitted into Guy's Hospital under the care of Mr. Durham on Oct. 7th, 1874. Gonorrhœa had been contracted four months previously and on admission the patient was found to be suffering from dyspnœa and his temperature was 103° F. A physical examination revealed the presence of dulness over the base of the left lung and systolic and diastolic bruits were heard at the base of the heart and were considered to be due to aortic stenosis and regurgitation. The diagnosis made was that of septicæmia with acute endocarditis following gonorrhœa. The patient died on Dec. 28th. At the post-mortem examination numerous crumbling masses of white clot exactly similar to the vegetations on the pulmonary valves were found in the smaller branches of the pulmonary artery. In the upper part of the left lung there was an extensive but ill-defined patch of hepatisation. The heart was not enlarged. On laying open the pulmonary artery the right anterior valve was found covered with a large mass of vegetations which projected and hung down some distance. The posterior valve had a considerable part of its edge neatly cut out just as if it had been done with a pair of scissors. It was not thickened in any way and had no vegetations on it at this part, although there were some vegetations where it joined the right anterior valve. The left anterior valve was perforated with a small hole, also neatly cut out; evidently these were caused by the presence of the mass of vegetations. The other valves were healthy. The kidneys weighed 21 ounces, they were pale and mottled, and in an advanced stage of tubal nephritis. Dr. Bryant brought forward this specimen to show that gonorrhœa was recognised at Guy's Hospital as being a cause of infective endocarditis as early as 1874. He had seen two other cases and in all three of the cases the pulmonary valves had been the valves affected. He had been much struck by this curious coincidence and should be glad to hear the experience of the other members present on this particular point. He had brought six specimens from the Guy's Hospital museum to illustrate the morbid anatomy of this disease. They showed masses of vegetations on the mitral, aortic, tricuspid, and pulmonary valves, on the ventricular surface of the mitral valve, and on the endocardium of the left auricle aneurysm, and rupture of the valves, rupture of the chordæ tendineæ, and dilatation of the cavities.

Dr. W. BULLOCH (London) remarked that during the last decade and a half the study of bacteriology had incontestably shown that the same group of clinical symptoms might be caused by a variety of different pathogenic bacteria, so that it had gradually come to be a necessity to specify the etiological feature of the disease. Such terms as "pyæmia" and "septicæmia" without a specific adjective were relics of the past. It did not appear strange to him that half a dozen different bacteria acting on the same region of the body should produce the same group of symptoms. Most of these symptoms were more or less connected with the disorders of the part, and if that part had to perform certain definite and important but often complex functions these might be disturbed by a great variety of morbid agents.

Dr. OTTO J. KAUFFMANN (Birmingham) regarded rheumatic endocarditis as an infective disorder, and he differed from Dr. Washbourn in not wishing to discard the term "infective endocarditis." In reference to the question of search for microbes in the living he had been uniformly unsuccessful though he had tried on many occasions. He had been in the habit of taking five cubic centimetres of fluid for examination, but perhaps this was not enough in view of the minute proportion of the microbe present.

Dr. F. J. DRIVER (Portsmouth) referred to the great difficulty in the diagnosis of some cases of malignant endocarditis during life. One case under his care (probably of malarial origin) had presented nothing more definite than shivering, rigors, and some very obscure physical signs.

Dr. E. F. TREVELYAN (Leeds) had collected 13 cases of meningitis; three were of pneumococcal origin and two had presented both pneumonia and infective endocarditis. All of his observations went to show that acute endocarditis was only a part of a general infection.

Dr. PAYNE (the President) thought the term "infective endocarditis" a bad one, though he thought that the term "infective" might be retained and that "endocarditis" might be discarded. Such cases were evidently cases of general septic infection in which the heart was specially involved. There were undoubtedly many septic organisms which could produce this general infection,

and thus we might speak of "streptococcic endocarditis," "pneumococcic endocarditis," and so forth. Undoubtedly general infection precedes the local manifestations, not only on the bacteriological grounds which had been so fully discussed but also on clinical grounds. There were two reasons for this conclusion—(1) he had observed many cases which had been ushered in with aguish fever and then later the cardiac valves were involved; and (2) he had seen cases which had begun with symptoms of general œdema and after this had subsided a cardiac murmur had developed. On these grounds the name "infective" might be retained, though the term "endocarditis" should be altered. As regards the question why in some cases one side of the heart and in others both were affected, perhaps the rheumatic cocci could live in arterial and not in venous blood, whereas other cocci might be able to live in both arterial and venous blood.

Dr. H. M. TICKELL (Cheltenham) thought that infective endocarditis, whether it was with or without pre-existing cardiac disease, could be divided into two groups: (1) without detectable source of infection, in which there was either (*a*) indefinite onset or (*b*) the onset was preceded by exposure to cold, acute rheumatism, chorea, nephritis (parenchymatous or acute tubal), malignant disease, or rupture of heart valve (traumatic); and (2) another group which might be called the metastatic group, where the primary infection is (*a*) croupous pneumonia or (*b*) specific infection such as typhoid fever, diphtheria, tuberculosis, gonorrhœa, or influenza, or (*c*) in which there was pyogenetic infection.

Professor CLIFFORD ALLBUTT, Dr. POYNTON, Mr. PAKES, Dr. ABRAHAMS, Dr. LAZARUS-BARLOW, and Dr. THEODORE FISHER also took part in the discussion.

Dr. WASHBOURN in his reply said that there was no doubt whatever that in old chronic valvular disease there was a far greater tendency for the arteries and the left side to be affected. Some of those who had spoken had thought it strange that whereas in rheumatic endocarditis only the left side of the heart was affected, in infective endocarditis both sides were diseased. He thought that the probable explanation of this was that the rheumatic toxin entered the body through the lungs and therefore reached the left heart first. Some doubt had been expressed as to the existence of gonorrhœal endocarditis because bacteriological proof was wanting, but the gonococcus was very difficult to detect. Nevertheless in 15 cases the gonococcus had been actually identified. In reference to the question whether pneumonia is a cause of infective endocarditis they must beware of the fallacy that pneumonia may arise in the course of the latter disease. He had been much interested in Dr. Bryant's description of his method of bacteriological examination after death, and he wished again to emphasise the importance of adopting aseptic precautions at all necropsies.

Dr. G. BELLINGHAM SMITH and Dr. J. W. WASHBOURN contributed a paper on

Infective Sarcoma in Dogs.

They had taken scrapings from a round-celled sarcomatous growth in the vagina of a bull bitch and had injected them subsequently into the abdominal wall of some puppies with the result that tumours of the same histological nature had in the course of a few months arisen in this region. Two separate swellings had appeared at each of the two points of inoculation, one connected with a mammary gland, another not so connected. The growth was a round-celled sarcoma. Excellent photographs and a water-colour sketch were shown.

The PRESIDENT of the section and others remarked on the extreme importance of these observations as throwing new light on the infectivity of malignant growths.

Dr. CAMPBELL THOMSON (London) read a paper on

The Pathology of Acute Chorea.

The paper was based upon a fatal case which he had recently had an opportunity of examining. The patient was a girl, aged 15 years, who was admitted into the Middlesex Hospital on April 20th, 1899, after having symptoms for a fortnight which had gradually increased in intensity. The case was a very severe one, the temperature was much elevated, and in spite of inhalations of chloroform and other treatment the patient died early on the morning of April 23rd. A post-mortem examination showed signs of a recent acute endocarditis of the aortic and mitral valves. There were no evident macroscopic changes in the brain except hyperæmia and a few minute hæmorrhages into the white matter. The brain was examined microscopically by different methods and sections of the spinal cord were also examined. The sum total of the changes found consisted of a slight loss of chromatophile substance at the periphery of the cell bodies of the brain, together with some swelling and alteration in the shape of some of the cells. With the nitrate of silver stain some varicosities of the cell processes were seen, but it was considered that they were very likely to be artificial and no conclusions were drawn from them. There were no changes found in the motor cells of the spinal cord. An attempt which was kindly made by Mr. Alexander Foulerton to obtain a cultivation from the cardiac valves failed as also did an attempt to obtain micro-organisms from the blood during life. The heart muscle and the kidneys were also examined, but they showed no important changes. After briefly discussing the different ideas concerning the causation of chorea Dr. Thomson concluded that the most reasonable one was that it was due to a toxin circulating in the blood, but he considered that at present there was not sufficient evidence to warrant a conclusion that it was of bacterial origin. Dr. Thomson then discussed the probable significance of the slight chromatolysis and swelling of the cells which he had found, and noted that the latter lesion had also been observed in five cases recorded by Dr. Charlewood Turner.[1] The changes found in the present case were not considered to account for the symptoms, since similar changes are produced by other diseases, but at the same time Dr. Thomson thought it important that such changes should be recorded, so that one day they might possibly obtain their proper significance when more was known concerning the nature of a nervous impulse and its true relation to nerve cells.

OPHTHALMOLOGY.

WEDNESDAY, AUGUST 2ND.

Mr. SIMEON SNELL'S Presidential Address on the Prevention of Eye Accidents occurring in Trades was briefly reported in THE LANCET of August 5th, p. 382.

The Pathological Significance of Sympathetic Irritation and its Connexion, if any, with Sympathetic Ophthalmitis.

Mr. F. RICHARDSON CROSS (Bristol) introduced a discussion on Sympathetic Irritation. He took a very broad view of the term, as it was practically impossible to distinguish in the early stages between simple irritation and more formidable aspects of sympathetic disease. Symptoms were excited in sound eyes by old shrunken globes, by badly adapted glass eyes, and even by optic nerve stumps, at various periods after the original injury, usually within one year, but possibly as late as 40 years. Definite inflammatory changes when they resulted usually occurred before that period. Mr. Cross suggested that the cause and channel of the morbid change still remained unproven. With regard to experiments on animals employed to elucidate the matter, he submitted that the condition did not occur in animals and that these therefore afforded no help in its explanation. The main conclusion was the necessity for the removal of all degenerate eyeballs when symptoms of irritation occurred in the sound eye.

Dr. LANDOLT (Paris) gave his entire adhesion to the last statement. 20 years ago such would have been considered unnecessary, but in the meantime many methods of treatment had been substituted. He cited an instance of a youth, aged 14 years, with a foreign body in the ciliary region who underwent subconjunctival injections of sublimate solution in the diseased eye for six weeks though the eye passed through all phases of atrophy after the injury and the sound eye suffered from obscurations, scotoma, and a dilated immobile pupil, the fundus and visual acuity remaining sound. It was only with difficulty that consent was obtained to enucleate the injured eye, which was found to contain a foreign body and was more than usually difficult to remove owing to adhesions from the subconjunctival injections. The uninjured eye recovered on the same day and remained sound.

Mr. MCHARDY (London) was entirely in agreement as to the treatment of these cases by removal of the injured eye. The symptoms might come on at any time between the ages of three weeks and 40 years and the lapse of time sometimes encouraged patients in a wrong course.

Deputy-Surgeon-General CAYLEY, I.M.S., quoted the case

[1] Transactions of the Pathological Society of London, 1892.

of an officer in India who had been shot in the eye as a boy and had retained bare perception of light in the injured organ. 17 years later there was discomfort in the injured eye and irritation in the other. The injured eye was removed and was found to contain a shot. The other recovered in a few weeks and was sound a year after. Such an instance of irritation could scarcely be explained on the microbic theory.

Mr. DEVEREUX MARSHALL (London) said that neither in sympathetic ophthalmia nor in irritation did the microbic or nerve-impulse theory satisfy all the conditions. Gonorrhœal ophthalmia, meningitis, and septicæmia occurred separately through infection of one eye without causing sympathetic disease of the other.

Dr. JOHN HERN (Darlington) cited two cases in which sympathetic irritation had subsided after the removal of the optic nerve stumps. In one case some general symptoms also subsided after removal of the source of irritation.

Dr. DE SCHWEINITZ (Philadelphia) said that modern observations evidently failed to confirm Deutchman's theory, though they did not exclude possible microbic influence. He thought that such a disease as that under discussion should not be studied in the eye alone and he recommended a study of the blood state and of the body temperature, as in other general diseases.

Dr. REEVE (Toronto) quoted a case in which spontaneous dislocation of the lens and hæmorrhage had led to photophobia, which was cured after a number of years by Mule's operation on the damaged eye. There was no external wound here to account for microbic infection. He also recounted two other cases in which sympathetic ophthalmia had been cured by the application of mercury and other treatment and he thought that enucleation of the damaged eye should not be considered as contra-indicated because sympathetic disease had commenced.

Dr. A. BRONNER (Bradford) cited a case of dislocation of the lens from a blow in the eye from a fist without rupture of surface continuity causing sympathetic irritation which recovered after enucleation. The worst cases were those attended with bad iritis.

The PRESIDENT of the section said that there was a general agreement that an eye which was painful and causing irritation should be removed. The conditions of sympathetic ophthalmia and sympathetic irritation were distinct. He had seen irritation quiet down in cases where enucleation had been refused. Cases of the kind under discussion were of less frequent occurrence than formerly, owing to greater regard to antisepsis and to the removal of foreign bodies.

Dr. A. BRONNER read a paper on

The Use of Homatropine in Asthenopia,

particularly in cases where the patient could not afford to completely rest the eyes at once and where atropine consequently could not be employed.

The PRESIDENT of the section said he used discs of homatropine and cocaine in these cases and was satisfied from experience that the treatment gave physiological rest without totally incapacitating the eyes.

Mr. ARNOLD LAWSON (London) also spoke in favour of homatropine in retinoscopy except for children.

Dr. SAMUEL LODGE, jun. (Bradford), read a paper on

The Results of the Removal of the Lens in High Degrees of Myopia

and recounted details of six cases in all of which, to the gratification of the patients, improved vision had resulted. The patients were all under 30 years of age. In some of these cases both eyes were operated upon.

Mr. CROSS congratulated Dr. Lodge upon the admirable result of his cases and said that none need fear to follow the example. The risks were very limited, but it was a good plan to get rid of the lenses within five or six days before severe hyperæmia was set up. This meant an early linear extraction.

Dr. A. BRONNER said that a large number of cases were unearthed by the operation, patients recommending their friends who had not previously been under medical treatment. He emphasised the necessity for seeing cases early after needling in order to avoid glaucoma.

Mr. JULER (London) reiterated the remarks of the previous speaker and quoted instances of early rise of tension after needling necessitating paracentesis.

The PRESIDENT of the section emphasised the necessity for needling freely so as to let portions of lens escape into the anterior chamber instead of swelling and for removing the lens at once if tension increased.

THURSDAY, AUGUST 3RD.

Enophthalmos.

Mr. TREACHER COLLINS (London) read a paper on this subject illustrated by lantern slides and including details of 10 cases, half of which were of traumatic origin, the other half being apparently spontaneous. Two of the latter were due to paralysis of the cervical sympathetic, being associated with drooping of the lid from relaxation of Müller's muscle and contraction of the pupil. The first patient, a female, aged 22 years, suffered also from sweating over the brow. The second patient had noticed watering of the eye for four years due to sinking in of the globe. He had had syphilis four years previously. The third case described was that of a female who had suffered from morphœa in the course of the fifth nerve above the eye for 18 years. The sclerosis extended in the orbital tissues. The fourth patient suffered from analgesia of the fifth nerve on the right side. There was no pupil contraction but there had been right-sided hemiplegia. The fifth was a patient with enophthalmos of the left eye in whom the lid dropped and the eye protruded on stooping or compressing the jugular vein owing to turgescence of dilated ophthalmic veins. The sixth case was that of a man who had congenital difficulty in outward rotation of the left eye with enophthalmos when looking to the right, due probably to congenital shortness of the rectus muscles, their action being unrestrained by the check ligaments of Tenon's capsule. The traumatic cases may result from paralysis of the sympathetic nerve. In two of the five cases there was loss of sensation over the face. In two others there was probably fracture of the wall of the orbit. Gesner had suggested that in many of these cases a scar extending from the margin of the orbit involved the orbital cellular tissue and by subsequent contraction caused sinking of the eyeball.

The PRESIDENT of the section, Dr. DE SCHWEINITZ, and Mr. CROSS cited further cases in the discussion.

Deputy-Surgeon-General CAYLEY opened a discussion on

The Visual Tests employed in the Services.

Two important questions presented themselves: (1) whether the tests were sufficiently searching and (2) whether they were so high as to reject needlessly suitable candidates. The modern long-range weapons had necessitated a stricter control of visual acuity in recruits and officers, the difficulties of myopes being enormously increased by smoke, fog, or rain. Raising the standard of existing tests really threw out very few, colour-blindness and hypermetropia were not taken into consideration. He urged that the wearing and supply of glasses as practised on the continent was impracticable in the various climates included in our active service. In the navy normal vision was required for cadets, and for ordinary seamen. The pilot service and mercantile marine had no fixed standard and in the last commonly no examination. These matters certainly needed revision. The speaker also adverted to quickness of vision and the small percentage of men in the army fit for signalling.

Dr. LANDOLT proposed a new test type in which a large segment of a circle adapted to the proper visual angle was employed, the candidate being required to say in which direction the opening in the circle pointed.

Dr. GEORGE MACKAY (Edinburgh) furnished a paper setting forth the effect of the present state of the examination.

Mr. T. H. BICKERTON (Liverpool) read a paper on the Non-exclusion of Men with Defective Sight in the Navy and Mercantile Marine, appending instances of unexplained shipwreck.

Mr. MCHARDY dwelt on the necessity of enforcing proper tests but without wrongfully rejecting candidates at the physical examination. The margin of muscular focussing power in youth was not at present allowed for, especially after a course of study.

Colonel DRAKE-BROCKMAN, I.M.S., recommended the standard of $\frac{6}{12}$ instead of $\frac{6}{36}$ and insisted upon the urgency of visual tests.

Mr. CROSS urged the necessity for subsequent examinations on account of progressive myopia, affirming that many myopes were capable of passing the tests by judicious management though their vision was far short of normal.

Mr. JOHN GRIFFITH (London) read a paper on

A Case of Melanotic Sarcoma arising in the Retrotarsal Fold of the Upper Lid, the Sclerotic being Tinged Brown.

The patient made a rapid recovery after free incision.

The PRESIDENT of the section, Mr. TREACHER COLLINS, and Mr. MARSHALL also cited cases, but not in the same position.

Dr. JAMES HINSHELWOOD (Glasgow) read a paper on

The Use of Euphthalmin: a New Mydriatic.

He described the advantages of euphthalmin as a mydriatic, two or three drops of a 5 per cent. solution effecting dilatation of three hours' duration in 20 minutes, adding that one drop of a 1 per cent. solution of holocaine previously instilled quickened absorption. Only slight weakening of accommodation ensued and no other inconvenient effects.

The PRESIDENT of the section mentioned mydrine as having similar advantages but being very expensive, euphthalmin being one-fifth the price of homatropine.

FRIDAY, AUGUST 4TH.

Dr. BULL (Paris) described an adaptation of the stereoscope for the detection of insufficiency of ocular muscles (hyperphoria).

Mr. WATSON GRIFFIN (Brighton) read a paper on

Cases illustrating the Value of the Correction of Hyperphoria.

He reported cases of hyperphoria in which binocular vision without eye strain was secured by an adaptation of prisms in the glasses worn for ametropia. Mr. W. Lang allowed him to mention two cases in one of which the strength of the prism had to be periodically increased, indicating a development of previously latent hyperphoria.

Mr. TREACHER COLLINS said that more attention was paid to this matter on the other side of the Atlantic.

Dr. REEVE (Toronto) spoke of cases and of the very careful adjustment of prisms necessary for correcting vision. On account of the great expense entailed by a triple combination of lenses he suggested an eccentric mounting of the ordinary correcting glasses.

Dr. ARNOLD LAWSON read a paper on

The Value of Correcting Refraction Errors in the Treatment of Trachoma

and cited instances in which rapid improvement had followed such correction though resisting ordinary treatment. He referred to the similarity between trachoma and adenoid growths in young people and the frequent dependence of diseases of the lids and conjunctival sac upon ametropia.

Mr. TREACHER COLLINS admitted the great influence of correcting glasses in these diseases, though very difficult to understand in cases of trachoma.

Colonel DRAKE-BROCKMAN spoke of the frequent occurrence of trachoma and other conjunctival diseases in the East and of the beneficial effect of correcting glasses.

Dr. DE SCHWEINITZ also alluded to the parallel conditions of the lids and conjunctiva, adding recurring meibomian cysts and styes and habit spasm of the eyes to the list.

Dr. JOHN HERN read a paper on

The Eye Symptoms in Hay Fever.

He described the symptoms and spoke of their removal by proximity to the sea. He mentioned cocaine in a from 2 to 4 per cent. solution as affording temporary relief.

Mr. TREACHER COLLINS mentioned the relief afforded by dark glasses.

Mr. DEVEREUX MARSHALL stated that these symptoms occurring in the early summer were as often induced by road dust as by direct exposure in the fields.

Mr. KENNETH SCOTT (Cairo) described a case of

Extensive Destructive Ulceration of the Eyelid

of two months' duration in a man, aged 45 years, who completely recovered under mercurial inunction and local application of europhen. Vision remained perfect and the globe was pretty well covered.

Mr. TREACHER COLLINS spoke of the greater frequency of phagedæna in the East.

Colonel DRAKE-BROCKMAN said that syphilis was so general in the East that the usual question was, "When did you have syphilis?" This was certainly syphilitic gumma. He spoke favourably of the local effect of europhen.

The following resolution was passed in the Section of Ophthalmology on Friday and has been sent to the Board of Trade:—

That the Ophthalmological Section of the British Medical Association beg to express their profound belief that it would prove of great public benefit if the Board of Trade could see their way to include in their regulations the twelfth recommendation of the Royal Society Commission: "That in case of judicial inquiries as to collisions or accidents witnesses giving evidence as to the nature or position of coloured signals or lights should themselves be tested for colour and form vision, and suggest its application in every case of judicial inquiry upon accidents at sea."

This completed the business of the section.

DISEASES OF CHILDREN.

WEDNESDAY, AUGUST 2ND.

Ununited Fracture in Childhood.

The Presidential Address on this subject by Mr. EDMUND OWEN appeared in abstract in THE LANCET of August 5th, p. 383.

Mr. GEORGE MORGAN (Brighton) alluded to the case of a child whom he had seen who was the picture of health and had been treated with the utmost care in hospital from the occurrence of the injury and latterly had undergone several operations without success. It was interesting to note that the fibula was entirely absent; so quite possibly there was some congenital weakness of the tibia also.

Mr. A. H. TUBBY (London) considered that osteotomy and osteoclasis were not such harmless operations as they seemed or were commonly thought to be and that some of these cases, which were numerous, were due to those operations. The bone was often noticed to be soft before the operation, so it would be a good rule to operate only on hardened bone. In one such case everything possible had been done to secure union, rabbit's bone being used for the purpose, but to no avail. The limb was in a state of fatty degeneration before the fracture.

The PRESIDENT of the section briefly summed up the discussion, urging strongly that no operation should be described as free from risk. He had tried puppy's bone to induce union, but without any result.

Dr. ROBERT MAGUIRE (London) then read a paper on

The Medical Treatment of Pleuritic Effusion in Childhood.

He recommended putting an exploring needle into the cavity of the thorax to see whether it contained serum or pus; this was particularly important in children as empyema in them was more latent than it was in adults. As a note of warning he said that the needle should be fairly large (or pus would not come through) and the suction power should be fairly strong. He frequently used the aspirator for this purpose and then if considered right the fluid could be evacuated forthwith. If there were much blood in the serum it would suggest the possibility of sarcoma. Pleuritic effusion was an active secretory process of the irritated pleura, and still more so in empyema; it was always encysted in the latter, and was often encysted in serous effusion. He dwelt on the resistance of the thorax; the rib-spring in adults gave positive tension, but not being developed in children it lessened the force of effusion. The heart could be displaced by a comparatively small pleural effusion. Of more importance was the depression of the liver, stomach, and spleen; if with dyspnœa, then aspiration should be performed. If the serum should be deeply bloodstained the aspiration should be stopped. If the amount of effusion was moderate and there were no signs of peril the medical man should not aspirate. He considered tubercle to be rarely the cause of pleuritic effusion; Sir W. Jenner said that it was the cause of purulent effusion. There was some tubercle occasionally in the lungs when there was pleuritic effusion, hence the advice above given about not aspirating unless there was urgent reason for doing so. It had been suggested that the pleuritic effusion in cases of tubercle of the lung might serve as some kind of antitoxin, and so should not be taken away; there was no proof of this but it was well worthy of investigation. The general health of the patient must, of course, be attended to and Dr. Maguire spoke highly of grey powder as acting very powerfully in the removal of fluid. There were not generally any reasons for absolute rest; a judicious open-air treatment was best. When the effusion was purulent the medical man should try to find out the course of the infective material. Most of the cases of empyema were due to the pneumococcus; often there was the septic staphylococcus or streptococcus as well.

Operators on adenoid growths were not always sufficiently careful either to remove all the vegetations, or to maintain complete asepsis, or to time their operations properly. Sometimes empyema had followed these operations directly. Even in empyema there might be no need for surgical aid. The chest might be tapped once or oftener and a cure might result. Occasionally no operation could be done as both sides were affected. There was not quite so much risk in leaving empyemata in children as in adults, for they did not get perforation of the lung so readily. One other point was that in pneumothorax sometimes the fluid was serous.

Mr. B. BETHAM ROBINSON (London) then read a paper on

Surgical Treatment of Pleuritic Effusions in Children.

He said that the presence of the surgeon was generally requested if the effusion was purulent. He discussed the best situation for tapping the effusion. There need not be complete withdrawal of the fluid and the vacuum should not be too great. Aspiration should be stopped if much bloodstaining came on. If the blood re-accumulated it suggested sarcoma or tubercle. Opening the pleural cavity for tuberculous pleurisy had been suggested on the analogy of opening the peritoneal cavity in tuberculous peritonitis. Of this he did not approve and he described the pathological conditions. Aspiration alone might be effective sometimes, but the fluid must be thin. He discussed the best position for incision and drainage, saying that it should not be lower than the sixth or seventh intercostal space, for otherwise the diaphragm would interfere. It was not true that the lower down the better the drainage. He advised resection of a rib, as it risked nothing. The finger could explore the cavity, find the amount of the compression of the lung, and clear out coagula, &c. Irrigation should not be made a usual practice; it should be done only with sterilised water or a boric acid solution and regularly, with an easy exit, so as to produce no intra-pleural tension. He believed that the lung expanded as well with a free opening as under the precaution suggested by Dr. Robertson of Oldham. The tube was often left in far too long. It might be taken out if the temperature was normal and if there was not more than one ounce of discharge per diem. Also if it was frequently found in the dressings, as that indicated that the lung was filling up the space. It could easily be put in again. Failure of the cavity to close was not common in children as it was due to failure of the expansion of the lung. If after three months the cavity still existed a thorough examination should be made and if necessary one or more ribs should be resected.

The PRESIDENT of the section said that he would like more work done on the nature of pleural effusions. He had noticed a tendency on the part of physicians to do surgical work. He asked whether an empyema could be opened, drained, and shut up in any case with safety. Sometimes the tuberculous effusion was apparently purulent. He discussed the choice of the place for incision and would certainly resect a rib in children as the tube was apt to get nipped. Irrigation should only be resorted to in septic cases. In taking the tube out he would keep in mind the possibility of having to re-introduce it as in the after-treatment of the tracheotomy tube. The drainage-tube might get into the pleural cavity and be hard to extract. He recommended tubes with a large flange of rubber sewn on in place of the safety pin.

Dr. MANSEL SYMPSON (Lincoln) said that in order to avoid the danger which the President had mentioned he always used where possible a Morrant Baker's tracheotomy tube for a drainage-tube in cases of empyema.

Mr. A. H. TUBBY gave some interesting facts as to the effect of irrigation in producing collapse. This varied with the pressure and the nature of the fluid. Carbolic acid or iodine caused blood-pressure to go down; evidently there was a sensitive pleural reflex acting on the vaso-motor centre.

Mr. R. STERLING (Stoneyford) remarked on irrigation.

Dr. G. F. STILL (London) described a case of albuminous expectoration lasting for several hours in a child, aged 10 years, who had had the chest aspirated. There should be no delay in the removal of pus from the thorax, as any moment dissemination of the pneumococcus might occur. He related particulars of a series of fatal cases of empyema, death being due in several to suppurative pericarditis, meningitis, and peritonitis. The chest should be opened freely and all thick lymph, &c., cleared away.

Mr. G. MORGAN spoke of the use of educating the child to blow out and inspire so as to expand the lung.

Dr. MAGUIRE and Mr. ROBINSON replied briefly.

Dr. G. F. STILL then read an interesting paper on the

Channels of Infection in the Tuberculosis of Children,

founded on post-mortem examination. In many cases of general tuberculosis it was hard to determine which part was first attacked. The condition of the glands was helpful in this matter. Children swallowed sputa and so infected their intestine or mesenteric glands. There were 10 cases of tuberculous mediastinal glands without lesion of the lung and nine cases of diseased mesenteric glands without lesion of the intestine. It was doubtful whether the first class could be due to extension from the glands of the neck. There were many more cases of affection of the right glands than of the left. Infection of the intestine accounted for 63 cases and infection by the lung for 138 cases, showing how vitally important purity of air was and that children should not be exposed to the risk of tuberculosis by being in the same room. Overcrowding was evidently responsible for many of the cases.

The PRESIDENT of the section inquired as to the effect of digestion on the tubercle bacillus.

Dr. STILL replied that tuberculous infection of the stomach was very rare, though digestion did not kill the bacilli.

Mr. GEORGE MORGAN then read a paper on

Tuberculous Adenitis of the Head and Neck.

This condition was not so common now as it was 15 years ago. He discussed the etiology with reference to acquired scrofula, intermarriage of predisposed persons, infection from mucous membrane, teeth, tonsils, adenoids, &c. The latter might be, with the tonsils, the seat of tuberculosis. For treatment all milk should be boiled, the children should be kept out of phthisical rooms, their teeth should be properly treated, adenoids and enlarged tonsils should be removed, and iodide of iron with malt should be given. Plenty of fresh air was essential and residence at the seaside was beneficial. Conditions of the skin or mucous membranes on which the morbid state of the glands depended should be treated. The lower glands should be taken out first without pressing on the glands so as to infect the neighbourhood.

Mr. ROBINSON said that in a case of adenoids he would treat the suppurating glands first and the adenoids afterwards.

THURSDAY, AUGUST 3RD.

Mr. JAMES GREEN (Salisbury), Vice-President, was in the chair.

Dr. A. M. GOSSAGE (London) read a joint paper by Dr. J. A. COUTTS (London) and himself on the

Causation and Treatment of Convulsions in Infancy.

After defining convulsions they said that one form just preceding death was really a form of dying and did not quite come under the ordinary class. They attached great importance to predisposing causes, such as an unstable and irritable nervous system. The exciting causes were rickets, laryngismus stridulus, craniotabes, concussion or cerebral hæmorrhage, birth palsy, meningitis, and uræmia, the latter being very rare in children under two years of age. In acute diseases, such as pneumonia and the specific fevers, convulsions were not so frequent at the beginning as in the course of the illness. Other causes were teething, severe surgical injuries or burns, and asphyxia, and perhaps this explained the convulsions of dying infants. With regard to pathology either no changes were found or any that existed were the results of the convulsions, coarse brain lesions excepted. For treatment the clothing should be loose and the child should lie on the back with the head slightly raised. A hot bath with mustard in it was useful. Inhalation of chloroform in severe cases or rectal injection of chloral hydrate and bromide of potassium might be resorted to, also nitrite of amyl or half a grain of morphia to an infant of six months. The treatment would vary according to the cause of the convulsions. Small doses of bromide should be continued for some months and borax should be tried if bromide failed.

Mr. A. H. TUBBY read a paper by Dr. HUGH JONES (Liverpool) on

The Public Health Aspect of Convulsions in Children.

Dr. Jones considered that convulsions were a sign of underlying disease; that they were beginning to be less frequently

assigned as a cause of death, though the certificates were not capable of affording very accurate information at present; that the largest proportion of deaths from convulsions was due to digestive troubles; and that there was an increase of deaths from premature birth. He also suggested that the social condition of the children was largely responsible owing to the ignorance of mothers, under-age marriages, and over-crowding.

Dr. EDMUND CAUTLEY (London) remarked that many of these cases were due to the feeding of the child and that mal-nutrition of the nervous system caused fits. He gave interesting details of a case where the improper feeding of a child had this effect. Excess of proteids induced fits either from the formation of curds, or from irritation of the intestine, or from giving rise to products of digestion which were absorbed and which acted directly on the brain.

The CHAIRMAN asked if any relationship to fits would explain the very numerous cases of overlaying, and he suggested that cupping and bleeding should be tried in uræmia.

Dr. GOSSAGE briefly replied.

Dr. E. GRAHAM LITTLE (London) read a paper on

Night Terrors in Children,

dividing them into those caused by digestive disturbances and those due in neurotics to disordered brain functions. They were often associated with rickets, adenoids, or enlarged tonsils, errors of refraction, and tapeworms. They were more common in rheumatic children and partook of the nature of dreaming, of somnambulism, and of epilepsy, and were associated with migraine by some writers. They were a central neurosis according to others. Dr. Little had noticed a large proportion of morbus cordis in his cases and was inclined to place dyspnœa as the ultimate factor.

Mr. WRIGHT (Natal) associated night terrors with somnambulism and praised bromide of potassium and chloral hydrate as useful in treatment.

Dr. CAUTLEY associated night terrors with somnambulism and with education.

Mr. G. MORGAN (Brighton) mentioned the influence of adenoids in this complaint.

Dr. J. A. MASTERS (London) was inclined to think that the bad treatment of children by their nurses in terrifying them was responsible for some of the cases.

The CHAIRMAN agreed that dyspnœa was the ultimate cause of these terrors.

Dr. MANSEL SYMPSON asked for further details of treatment.

Mr. A. H. TUBBY read a paper on an

Operation for the Relief of Contracted Hand and Arm after Infantile Hemiplegia.

He detached the pronator radii teres from its radial end (leaving a bit of tendon on the bone for easiness of sewing) through the interosseous membrane, and round to its old attachment, thus converting it into a supinator. The flexor carpi radialis was divided at the wrist which diminished pronation and also flexion of wrist. He would also divide the flexor sublimis digitorum, the flexor carpi ulnaris, and if necessary the flexor longus pollicis. Thorough asepsis must be maintained during the operation. The wrist should be gradually straightened.

Mr. JACKSON CLARKE said that physicians generally were against advising operations in these cases but he agreed with Mr. Tubby as to the usefulness of doing them. He elongated the tendons.

Mr. WRIGHT related a case of Spastic Infantile Hemiplegia on which he had operated with success.

Mr. C. H. PARKINSON (Wimborne) read a paper on the Varieties and Causes of Cough in Children with especial reference to Practical Treatment.

Dr. CAUTLEY read notes of a case of

Abnormal Ossification of Both Parietal Bones in an Infant,

aged eight months, who died from marasmus, the right parietal bone being divided into two, and the left into three parts. The child had snuffles and a fit, a previous child had rickets, and a later one congenital syphilis. Dr. Cautley suggested that the sutures showed evidence of irregular new centres of ossification and not any linear tabes comparable to the craniotabes so often found in rickety heads.

PHARMACOLOGY AND THERAPEUTICS.

THURSDAY, AUGUST 3RD.

The subject arranged for discussion was Intestinal Antiseptics and their Value. The discussion was opened by Dr. BURNEY YEO (London).

Previously to the opening of the discussion Dr. GEORGE HERSCHELL (London) exhibited a New Combined Galvanic and Faradaic Battery. Among other advantages were an automatic action for indicating in which direction the current was running, while the cells were so arranged as to be easily inspected in case renewal or adjustment was required.—The PRESIDENT (Professor J. B. BRADBURY of Cambridge) then called upon Dr. Burney Yeo to open the discussion on

Intestinal Antiseptics.

Dr. BURNEY YEO commenced by saying that intestinal antiseptics and evacuants had for a long time been in use without the *rationale* for their use being known. The old blue or calomel pill together with the black draught which dissipated the spleen and the vapours for our forefathers were instances to the point. He intended to consider the subject under four headings: (1) What was the scope of antiseptics? (2) What was the scientific basis for their use? (3) Under what conditions were they applicable? and (4) What were the means of applying intestinal antiseptics? With regard to (1) the medical use of antiseptics was different to the surgical use. The surgeon nowadays aimed rather at asepsis than at antisepsis. But in medicine as concerned with the intestinal contents asepsis was impossible. We must, if possible, prevent, or, at any rate, antagonise, auto-intoxication—i.e., intoxication of the organism with the products of digestion. With regard to (2) it must be remembered that certain bacilli were only harmful in the presence of putrefaction or other abnormal condition. The bacillus coli, for instance, was a normal inhabitant of the intestine and under ordinary circumstances was harmless. If, however, the bowel became abnormal in any way owing to catarrh, long-continued constipation, or sometimes injury the bacillus coli seemed to take on a virulent action. When associated with the bacillus typhosus it had the power of intensifying the virulence of the latter. Dr. Burney Yeo cited the experiences of Dieulafoy upon the bacillus coli when taken from an appendix the cavity of which had got shut off from the rest of the bowel and the same organism when taken from the normal mucous membrane of the bowel. The former was virulent, the latter was not so. As, then, the virulence of intestinal bacteria depended upon their environment, so by modifying that environment it was reasonable to suppose that we could modify their virulence. With regard to (3) intestinal antiseptics were indicated in gastric catarrh and fermentative dyspepsia. Grangé recommended in cases of summer diarrhœa the use of plain boiled and cooled water. He claimed that the use of this diluted the toxins. There were many other conditions to which fermentative dyspepsia and auto-intoxication gave rise. Such were dyspepsia, chest pain simulating angina pectoris, vertigo, aphasia, and anæmia. Even pernicious anæmia had been considered by some observers to depend upon some toxin which exerted a hæmolytic action. There were three other diseases in which the use of intestinal antiseptics was rational—namely, cholera, dysentery, and typhoid fever. Of the first two Dr. Burney Yeo said that he had no practical experience, but with regard to typhoid fever he had for some years advocated and practised the use of intestinal antiseptics. Typhoid fever often exhibited symptoms of being due to a mixed infection and this might explain the extraordinary variations in the severity of cases. He cited some instances in which the use of a chlorine and quinine mixture given every two or three hours had been attended with most marked results for the better in cases of typhoid fever. So, also, in some cases of indefinite febrile affections accompanied by rise of temperature, furred tongue, and foul-smelling stools the use of thymol by the mouth, together with irrigation of the large bowel by eucalyptol, olive oil, and soap-and-water administered in the knee-chest position, had rendered the patients well. He was not able to say to what exact disease this condition was due, but he thought that whether the original infection had been by typhoid fever or influenza that the condition which he was called upon to treat was due to the action of the bacillus coli in an abnormal environment.

With regard to (4) the various intestinal antiseptics were water boiled and cooled, calomel and salines, both of great value in the *early* stages of typhoid fever. Salicylate of bismuth and carbolic acid were both useful. As to the latter Dr. Burney Yeo cited a case published recently in THE LANCET by Dr. G. Williams,[1] where a patient suffering from typhoid fever took by mistake one ounce of carbolic acid. He had of course to be treated for the toxic effects, but recovered from them with his typhoid fever symptoms much lessened. Salol was very uncertain. Eucalyptol and thymol were both good and irrigation of the large bowel in such cases as he had mentioned was a necessity. Patients, especially in typhoid fever, must not be overfed. Dr. Burney Yeo concluded his valuable paper with a warning against the production of the modern manufacturing chemist who, he said, set up to teach the clinical physician.

Dr. VAUGHAN HARLEY (London) followed with an account of an investigation which had been carried out upon the Excretion of Aromatic Sulphates. Calomel sometimes, he thought, in cases where there was no putrefaction did not act so well as a mild aperient.

A discussion followed.

LARYNGOLOGY AND OTOLOGY.

WEDNESDAY, AUGUST 2ND.

The Presidential Address, delivered by Dr. CRESSWELL BABER, was briefly reported in THE LANCET of August 5th, p. 384.

The SECRETARY read a paper received from Mr. R. LAKE (London) and Mr. J. POLLARD (London) upon

A Case of Exophthalmic Goitre Cured by Removal of One Lobe of the Thyroid.

The authors briefly stated the conditions that influence the choice of operation in the various cases of this disease. Their case was that of a woman, aged 32 years, who had suffered from Graves's disease for six years. The prominent symptoms were exophthalmos, tachycardia, fainting fits, intense nervousness, and great thyroid enlargement. The onset of the illness was traceable to recurrrent attacks of influenza. Practically all acknowledged forms of treatment, both internal and external, including the so-called Indian treatment, were tried; none of them, however, produced any amelioration in the symptoms. The operation was performed on May 18th, 1898. The incision was about five inches long, extending from the angle of the jaw on the right side to the sterno-clavicular joint on the same side. The dissection was long and difficult, partly owing to the extreme vascularity of the parts and partly to the fact that the enlarged lobe extended beneath the sterno-mastoid muscle, the trachea, and the sternum. The inferior thyroid artery was twice its usual size and the lobe after removal measured four and a half by three and a half inches. The patient showed no bad symptoms from the anæsthetic. During the first four days she had several attacks of cyanosis and pain on swallowing, and on the second day the temperature rose to 100° F., but this was the sole occasion on which it was so high. The results were most satisfactory and remained so. The intense cephalalgia present before was never noticed after the operation. The pulse which was 160 before the operation fell in a week to 98 and was at the time of writing little quicker than normal. The exophthalmos, the tachycardia, and the faintness were also gone, and, finally, the scar was only visible for about an inch at the upper part of the wound.

Dr. WATSON WILLIAMS (Bristol) remarked that he had observed in a similar case of exophthalmic goitre that whilst removal of one lobe of the thyroid gland had been followed by marked amelioration of the symptoms they had not wholly disappeared, some exophthalmos, tremor, and tachycardia persisting. It was well to remember that Graves's disease was essentially a disease of the nervous system and not of the thyroid gland, although excessive gland activity, when present, aggravated the symptoms which it did not originate, just as starch or sugar in the diabetic diet usually aggravated the disease, diabetes, which these common articles of food did not cause. The occurrence of unilateral cases of Graves's disease afforded proof of these views, consequently they could not hope that mere removal of one or both lobes of the thyroid gland would completely cure the patient. While congratulating Mr. Lake and Mr. Pollard on the results in this case he desired to emphasise the desirability of treatment by rest and drugs first, reserving operative interference for those very severe cases which did not improve under other modes of treatment, (1) because a large number of cases were amenable to treatment by drugs and eventually recovered; (2) because operative treatment was attended with a very high mortality; and (3) because it did not afford a cure.

[1] THE LANCET, Jan. 8th, 1898.

THURSDAY, AUGUST 3RD.

Mr. CHARTERS SYMONDS (London) and Dr. E. J. MOURE (Bordeaux) opened a discussion upon

The Diagnosis and Treatment of Chronic Empyema of the Frontal Sinus.

Professor LUC (Paris) followed with a paper on a Fatal Case of Frontal Sinus Empyema. The patient, a boy, 10 years of age, had had purulent discharge from the left nostril for four years. Intra-nasal treatment had been tried and found insufficient and the frontal sinus was then opened. Intracranial complications ensued and terminated fatally. Professor Luc concluded that the ethmoidal cells played the more important part in the case and through them intracranial infection had been carried.

Dr. HERBERT TILLEY (London) read a paper giving the history of a Fatal Case of Chronic Frontal Sinus Empyema.

Dr. RÖPKE (Solingen) described his method of operating upon the frontal sinus and showed a series of photographs in illustration of the results obtained.

A paper on the subject was also received from Dr. SPIESS (Frankfort).

Dr. ERNEST WAGGETT (London) observed that acute frontal sinus empyema was exceedingly common and almost invariably ended in spontaneous recovery. Zuckerkandl showed that the frontal sinus spontaneously recovered more readily than the other accessory sinuses. These facts were evidently due to the excellent drainage which was furnished by the natural orifice. The mere fact that an empyema was chronic was in itself evidence that the natural orifice was abnormal and unsuited as an efficient drain, or else that some serious lesion existed in the sinus which was not likely to clear up under mere irrigation. Consequently a cutting operation was necessary in all chronic frontal empyemas. Of such operations the external were safer, easier to perform, and more efficient than any intra-nasal proceeding.

Mr. MAYO COLLIER (London) laid stress upon the latent form of empyema of the frontal sinus and the fact that the pain or headache might be at some distance from the seat of disease.

Dr. BRYAN (Washington) referred to recent anatomical investigations into the relationship of the antrum with the frontal sinus and the way in which the former might act as a reservoir for the latter. He also alluded to the periodicity of the headache and the frequency with which the fronto-ethmoidal cells were affected in these cases. Failures in operation he considered were in some measure to be attributed to omitting to curette the floor of the frontal sinus and cells.

Dr. LOGAN TURNER (Edinburgh) discussed the value of transillumination in the diagnosis of chronic empyema of the frontal sinus. Dr. Lubet-Barbon and Dr. Furet of Paris in a recent paper had considered the existence of opacity on the suspected side of some importance. Dr. Turner, amongst the 500 skulls which he had examined, had found both the frontal sinuses present in 357, or 71 per cent.; both had been absent in 80, or 16 per cent.; and in 63, or 12·5 per cent., one sinus had been absent. Of the 357 skulls in which both sinuses were present 98 failed to illuminate on both sides and 50 failed to illuminate on one side. Of the 63 skulls in which one sinus was absent 40 illuminated on the opposite or sinus side, while 23 were negative to illumination on the opposite side. He considered the value of transillumination as a diagnostic aid very considerably weakened by these anatomical facts. Opacity did not mean necessarily the presence of pus.

Mr. W. J. NOURSE (London), Dr. DUNDAS GRANT (London), Dr. WILLIAM HILL (London), Dr. HERBERT TILLEY, Dr. SCANES SPICER (London), Dr. KIPP (New York), and Dr. RUDLOFF (Wiesbaden) also took part in the discussion.

The PRESIDENT of the section, in briefly reviewing the discussion, considered that the general opinion of the

meeting seemed to be in favour of opening the frontal sinus when it was the seat of chronic empyema.

TROPICAL DISEASES.

THURSDAY, AUGUST 3RD.

DR. GEORGE THIN (London), the President of the section, opened the discussion on

Sprue

by reading a paper entitled "Notes *re* Discussion on Psilosis or Sprue." Dr. Thin mentioned four varieties of the disease. First, the type most common in the Far East which is ushered in by raw or sore tongue, mouth, and throat and accompanied by diarrhœa. Secondly, the Indian type, the chief feature of which is copious watery stools, the mouth and tongue symptoms not showing themselves till later. Thirdly, the type of the disease which is met with in China and the Eastern Archipelago—a form of chronic diarrhœa in elderly persons who had resided there for a long time. This was a gradually developing ailment, the chief characteristic being looseness of the bowels and after some time thinning of the epithelial covering of the tongue and rawness of the surface. Fourthly, a group of cases consisting of persons who, long after they have returned to this country, develop symptoms akin to, if not identical with, sprue. The early pathological changes in sprue, said Dr. Thin, are undetermined. The anatomical changes met with in cases of death after prolonged illness are atrophy of the tissues and organs of the body and general emaciation. The submucous coat of the intestine—the ileum more especially—is sclerosed and the glandular elements are atrophied and degenerated. In regard to the etiology of the disease Dr. Thin stated that but little was known. The disease was associated with residence in certain parts of the world and it was of a specific nature, as was made clear by the symptoms. The focus of the disease seemed to be in the ileum and the effect of the poison in the small intestine was to alter its secretion and to allow the food bolus to retain its acidity. The effects of the poison were to produce anæmia and to destroy the colouring matter of the bile. Milk diet seemed to act by starving out the intestinal poison and this was by far the best form of treatment in acute cases, but in many cases meat-juice seemed to suit admirably. Dr. Thin related a case in which strawberries combined with milk diet seemed to agree with the patient and to facilitate cure.

Dr. HENDERSON (Shanghai) related his experience of sprue and its treatment in Shanghai. When he arrived in China in 1868 sprue was not recognised as a separate disease but was classed with other cases of intestinal flux. He now considered, however, that sprue was a definite disease and when the mouth was affected a grave prognosis was indicated. Dr. Henderson stated that sprue occurred frequently in delicate persons, females especially, who had been in China for two or three years only and also in another class of persons—viz., those who had been 15 years, 20 years, or even more in the Far East. He had seen mouth lesions follow or accompany the diarrhœa, and he had also known mouth lesions to continue after the stools had become solid. He was not aware that he ever saw a case in which the tongue became raw and bare before the diarrhœa appeared.

Dr. JAMES WATSON (Southsea), vice-president of the section, described the case of a woman who contracted in India a disease resembling sprue. The disease appeared suddenly while the patient was in the Hills, but the diarrhœa was arrested when she took up her residence at a still higher level. The disease had continued off and on up to the present time and milk diet seemed to suit the patient best.

Mr. JAMES CANTLIE (London), stated that sprue was best treated by a meat diet. Milk, he contended, was calculated only to relieve the symptoms, not to cure the disease, and he withheld milk rigidly from the treatment of all cases of intestinal flux. Stools passed during a milk diet were not fæcal and were mostly composed of the undigested curd of the milk. The line of treatment which he pursued consisted in giving five ounces of finely-minced beef lightly cooked thrice daily with plain jelly during the night to relieve hunger. Rest in bed, a wet pack applied for two hours twice daily, and a binder firmly fixed round the abdomen were essential adjuncts to the diet.

Major GILES, I.M.S., said that he was not aware that he had met with cases of sprue in northern India, but he believed that "hill diarrhœa" was allied to sprue.

Captain LAMB, I.M.S., said that the deleterious curd in milk might be removed by giving citrate of soda (1 in 400) with the milk.

Dr. PATRICK MANSON (London) considered sprue to be pandemic in the tropics and stated that he had seen cases of sprue from the West Indies, India, and China. He was of opinion that with sprue, as with dysentery, they were not dealing with a single disease but rather with a group of diseases. In tropical climates the abdominal organs were severely tried functionally and when exhausted they were liable to be attacked by disease and parasites of various kinds, and in this way the intestines became the seat of sprue. Dr. Manson stated that he had seen a case in which the mouth and stomach were alone the seat of disease, diarrhœa not developing until much later. He held that there was no exclusive treatment for sprue, that milk was the staple element of diet, but that meat diet proved useful in many cases. He advocated rest and warmth and considered that bananas and other fruit, such as strawberries or apples, were useful adjuncts.

Dr. SARAT MULLICK (London) said that he had never seen sprue in India but from experience gained of two cases in this country he thought a concentrated milk diet was useful and koumiss particularly so.

Inspector-General TURNBULL, R.N., stated that he had never met with a case of sprue on board Her Majesty's ships, but he had seen several in naval hospitals at home. He had known the meat diet practised by Mr. Cantlie to produce rapidly curative effects.

Colonel MACLEOD said that he had been struck by the absence of sprue in Calcutta and Northern India and although they had plenty of diarrhœa and hill diarrhœa he had not met with the sore mouth and other symptoms which prevailed in persons suffering from sprue in China. Colonel MacLeod protested against sufferers from sprue being sent to the South of France or to Italy.

Dr. RHO (of the Italian navy) suggested that the condition of the intestine in sprue resembles somewhat the state of the stomach in Reichman's disease—gastro-succorrhœa.

Dr. SAMBON (London) drew attention to the geographical distribution of sprue which enables a distinction to be made between it and allied diseases. The plan of treatment of sprue advocated by Dr. Begg of Hankow, China—namely, the administration of santonin—was declared not to have been successful in the hands of Dr. Manson, Dr. Thin, or Dr. Henderson.

THE ANNUAL MUSEUM.

(Continued from page 388.)

II.—FOODS AND FOOD PRODUCTS.

Special foods were again a feature of the annual museum. Peptonised preparations, beef essences, malted cereal foods, humanised milk, Pasteurised milk, and diabetic foods have now such careful attention bestowed upon their manufacture that the practitioner has little difficulty in choosing a food for a special dietetic purpose. The exhibits in this section were, perhaps, not so numerous as last year; nevertheless, an excellent assortment and variety were presented to view.

The stall of Messrs. G. Van Abbott and Sons (104, Wigmore-street, Cavendish-square, London, W.) was loaded with every conceivable kind and modification of food designed for the diabetic. Special attention is of course directed to making a cake, biscuit, or loaf not only as free from carbohydrate material or sugar-forming compounds as possible but palatable, and Messrs. Abbott and Sons have attained undoubted success in this regard. There were gluten bread, soya bread, diabetic biscuits, &c., while other invalid specialities were represented by some excellent and attractive specimens of turtle soup, consommé, ox-tail, &c. The exhibit included some novel and useful biscuits, such, for example, as hypophosphite of lime biscuits, digestive biscuits (laxative), and nutritive beef biscuits containing 20 per cent. of Mosquera beef meal and therefore the fibrin as well as the albumin of meat. Messrs.

Callard and Co. (65, Regent-street, London, W.) exhibited similar diabetic foods. Thus there were diabetic biscuits, cake, and bread, practically starchless, while special foods for obesity, rheumatism and gout, constipation, and a non-farinaceous infants' food were offered for inspection and taste. The Fairchild digestive products (Fairchild Brothers and Foster, Snow-hill-buildings, London, E.C.) always afford an attractive and interesting group. Foremost amongst these, perhaps, is "pepsencia"—a very agreeable and active liquid preparation of pepsine made directly from the peptic glands and containing all the constituents of the gastric juice. Then there is the series of zymine powders for peptonising milk. Our own laboratory experiments have shown how reliably these preparations act. Lastly should be mentioned the peptogenic milk powder, the composition and properties of which make it admirably adapted for producing quickly from cow's milk a product approximating very nearly to the composition of human milk. Further, the milk so prepared is not wholly peptonised, only partially so, the casein being converted into a form resembling the soft flocculent digestible casein of human milk. Panopeptone is a sherry-coloured fluid containing peptonised bread and beef. It is an agreeable preparation and has proved an excellent restorative. A deservedly well-known name in connexion with invalid foods is that of Brand and Co., Limited (11, Little Stanhope-street, Hertford-street, Mayfair, London, W.), who had a well-arranged stall stocked with a variety of their excellent preparations. Amongst these we noticed the essences of beef, mutton, veal and chicken, turtle broth, concentrated beef-tea in skins, and various jellies. Brand's meat-juice has been analysed in THE LANCET Laboratory and the report showed it to contain a maximum amount of unaltered albumin expressed in the cold from meat. It is a powerful food and restorative because showing a high percentage of real nutrient matter which is readily absorbed. A nutrient powder is also worth noting; it consists of muscle fibre only dried below the coagulation point of the tissue proteids. It is tasteless and is said to be easily digested, in which case it must be highly nourishing. An excellent series of foods was shown by Messrs. Allen and Hanburys (Plough-court, Lombard-street, London, E.C.). Their foods for infants are now so well known as hardly to need further description. They have been dealt with fully and analytically in THE LANCET Analytical Records when it was shown that by a special method of manufacture, including the digestion of the milk proteids, the foods were admirably calculated to meet the needs of infants. There is a scale of three foods, the first to be used during the first three months of infant life, the second to be used during the second three months, and the third for infants five or six months of age. Milk and milk proteids were attractively represented in the very comprehensive number of preparations shown by the Aylesbury Dairy Co., Limited (St. Petersburgh-place, Bayswater, London, W.). This company have undertaken most laborious researches under the guidance of their analytical chemist, Mr. Droop Richmond, into the composition of both cows' and human milk with the result that they have been able to place a number of valuable and reliable food products on the market. There were shown a series comprising humanised sterilised milk, peptonised milk, whey specially prepared for the anæmic, sterilised milk and cream, sterilised foods, and sparkling koumiss which has been employed as an effective nutrient in phthisis. It appears to be particularly well tolerated in gastric disturbance. An interesting and complete display of special foods was that of the Bovril Co., Limited (Farringdon-street, London, E.C.). The exhibits were much too numerous to mention individually, but there were some special preparations calling for notice. Virol, for example, is a unique food, being a combination of active malt extract with marrow fat. It contains this nourishing fat in a very assimilable form owing to its peculiar physical condition in association with diastase. Under the microscope the fat cannot be distinguished from the malt extract, but on adding a drop of water an emulsion is obtained containing myriads of tiny fat globules. Invalid Bovril has been analysed in THE LANCET Laboratory with results which show it not only to be a powerful nutrient, but well adapted to the debilitated conditions of the sick and invalid. Bovril meat-juice, again, is expressed in the cold and contains a high percentage of the albuminous principles of meat which are coagulated on boiling. Messrs. Taylor and Sons, dairy farmers (Portsmouth), afforded evidence in their exhibit of their intention to keep pace with modern knowledge and requirements. Their stall was devoted to the display of specimens of sterilised milk and cream and to milk products, illustrating the preparation of humanised milk by Dr. Gaertner's process. Mr. Leopold Hoff (29, New Bridge-street, London, E.C.) exhibited his well-known malt extract, the first that was placed on the market. Our own analysis has shown it to be a very nutritious article and in many particulars superior to stout; it is free from acidity and has a rich malty flavour. It contains all the nourishing principles, both mineral and organic, of malt which for this purpose is specially selected. The Cerebos Co., Limited, Newcastle-upon-Tyne, has brought a very welcome and much needed improvement on our tables by providing a salt quite free from deliquescent properties in consequence of which it always remains as a finely divided dry powder which never "cakes." The salt also contains phosphate the addition of which has much to do with the salt being permanently dry besides giving it enhanced dietetic properties. Pure sodium chloride is not deliquescent but the presence of magnesium chloride in ordinary salt makes it so. The Maltine Manufacturing Co., Limited (24 and 25, Hart-street, Bloomsbury, London, W.C.), had an exhibit divided into two sections, the first being devoted to maltine and maltine compounds and the second to the "liquid peptonoids" of Carnrick and Co., Limited, of the same address. Maltine is very highly diastasic and affords an excellent vehicle for many drugs, as, for example, hypophosphites, cod-liver oil, strychnia, phosphorus, quinine, and iron (Easton's syrup), &c. "Liquid peptonoids" is a powerful nutrient and stimulant, requiring little digestive effort, since it is prepared from "beef peptonoids" or predigested and dissolved beef. A particularly nourishing stout was offered for taste and trial by a local firm of brewers—Messrs. Long and Co. (Southsea Brewery, Hants). It yielded excellent results on analysis which demonstrate it to contain a maximum of the nutrient extractives of malt. It is quite free from acidity, though ripe, and possesses a soft, mellow, malty flavour. The food products known by the name of Mosquera were exhibited by Messrs. Parke, Davis, and Co. (21, North Audley-street, London, W.). The merit of these preparations is that they are not mere food stimulants but decided nutrients, since they contain either the muscular fibre and albumin or else their peptonised products. The nutrient suppositories represent about 125 grains of fresh lean beef almost entirely peptonised. Mr. Henri Nestlé (48, Cannon-street, London, E.C.) presented to view his excellent concentrated milk which contains a maximum of cream, besides a food for infants and invalids of excellent flavour and of a degree of digestibility in accordance with the special requirements indicated. The Viking milk is similarly concentrated, but without the addition of sugar. These preparations are obviously sterile, but no antiseptics are added. Messrs. Cadbury Brothers' cocoa (Bourneville, Birmingham) is well known as a pure product without any objectionable addition but the indigestible fat of which is

in a great measure removed. Special foods that have met with great success are those of Mellin's Food Company, Limited (Marlborough Works, Stafford-street, Peckham, London, S.E.). At the exhibition they comprised a food for infants and invalids prepared from cereal grains in which the starch has been rendered soluble by diastase; lacto-glycose, of the same composition as the food just described, but associated with cow's milk; "food" biscuits, and, lastly, an excellent cod-liver oil emulsion containing 50 per cent. of best Norwegian oil in a perfectly emulsified condition without the aid of alkaline and other objectionable ingredients. The great and important changes that have taken place of recent years in the manufacture of bread, and in a very satisfactory direction from a dietetic point of view, found illustration in the exhibit of the Hovis Bread Flour Co., Limited (Macclesfield). As is well known, Hovis flour contains the germ of wheat which is exceedingly rich in nourishing substances, but owing to its tendency to deteriorate it had to be eliminated unfortunately in bread-making and thus much of the nitrogenous and flesh-forming substances of wheat were lost. In the Hovis process these valuable portions of the wheat are retained. The resulting bread is excellent to the taste, sweet and nutty, and remains moist for a much longer time than does bread prepared in the ordinary way. The stall presided over by representatives of the Protene Co., Limited (36, Welbeck-street, Cavendish-square, London, W.), contained a large assortment of protene preparations, the basis of all of which is the casein of milk. The nitrogenous value of food by their addition is thus considerably enhanced, and we have shown in our Analytical Records the extent to which this is so. It would appear also that milk proteids do not undergo cleavage, as do many albuminoids widely distributed in food, into bodies reacting as sugar. This suggests the probable value of milk proteids separated from sugar, as in protene, as a food in diabetes. The protene preparations comprise bread, biscuits, and a variety of fancy preparations. "Albene" is the name given to a highly refined vegetable fat which is well suited for cooking purposes and in some respects presents distinct advantages over butter. It may also be used as an ointment base. It is purified and refined by Broomfield and Co. (83, Upper Thames-street, London, E.C.). Lastly should be mentioned the standard concentrated milk preparations of the Anglo-Swiss Milk Co. (10, Mark-lane, London, E.C.). The "Milkmaid Brand" is well known, and this may be largely attributed to the fact that the concentrated milk has always given on analysis a percentage of fat, so that when diluted in accordance with instructions it yields a rich milk not in any degree deficient in milk fat. "Ideal milk" is unsweetened, sterilised, and enriched with cream.

(To be continued.)

THE SIXTH INTERNATIONAL OTOLOGICAL CONGRESS.

THE opening meeting of the Sixth International Otological Congress was held in the Examination Hall on the Victoria-embankment on Tuesday morning, August 8th. Of the previous Congresses the first was held in New York in 1876, the second in Milan in 1880, the third in Basle in 1884, the fourth in Brussels in 1888, and the fifth in Florence in 1895. The number of the members of the present Congress is, exclusive of ladies, upwards of 250.

The proceedings on Tuesday commenced with an address by the President of the Organisation Committee, Dr. URBAN PRITCHARD, who afterwards proposed a vote of thanks to the Royal College of Physicians of London and the Royal College of Surgeons of England for having placed at the disposal of the Congress their Examination Hall. He further expressed his thanks to the Royal College of Surgeons of England for the loan to the Congress museum of some of its most valuable and interesting specimens, more particularly mentioning those of Professor Stewart on the comparative anatomy of the ear and nose.

Sir WILLIAM MACCORMAC, in the absence of the President of the Royal College of Physicians of London, acknowledged the compliment and congratulated the President of the Organisation Committee on his address and on the large numbers attracted to the Congress in the cause of science. The Royal College of Surgeons of England, he said, had great pleasure in lending specimens from their collection to the Congress museum. A Congress such as this did much good in promoting a knowledge of one another and of the work of each other.

Professor GRAZZI of Florence, President of the last Congress, then gave an address. He expressed his pleasure that the hopes he had entertained of the next Congress being held in London had been realised. He regretted that so long an interval had elapsed between the fourth and the fifth Congress and he hoped that such an interval would not recur. He referred to the Congress in Milan and to the work of Voltolini, and to that of Sir William Wilde and Toynbee in England, who had brought otology out of the *terra incognita*. Trolsch, who contributed so much to the science in Germany, regarded himself as a disciple of these two English pioneers. Finally, he offered a vote of thanks to Dr. Urban Pritchard and to the British Organisation Committee for their efforts in so successfully promoting the present Congress.

Professor GRAZZI then proposed that a telegram should be addressed to the Queen offering to Her Majesty the respectful congratulations of the Congress on the completion of the sixty-second year of her reign.

Professor POLITZER then submitted the name of Dr. Urban Pritchard as President of the Congress and that of Dr. Cresswell Baber as Secretary-General. As Secretaries he proposed the following gentlemen: Dr. Thomas Barr of Glasgow, Dr. Benni of Warsaw, Dr. Bobone of St. Remo, Dr. Hartmann of Berlin, and Dr. Lemoyez of Paris; as Treasurer Mr. Cumberbatch of London. The above to form the Editorial Committee for the Transactions of the Congress

The names proposed were seconded by Professor LUCAE of Berlin and the motion was carried unanimously.

This concluded the business of the opening meeting.

It has been decided that the British section of the museum in connexion with the Congress shall remain standing for a week after the Congress. The British section consists of a complete collection of specimens and preparations embracing the comparative anatomy, embryology, anatomy, injuries, and diseases of the ear, nose, and naso-pharynx, arranged in pathological order. Members of the medical profession will be admitted to the Museum on presentation of their visiting cards.

LUNACY IN SOMERSET.—The report of the Somerset and Bath Asylums Committee was presented at a recent meeting of the Somerset County Council. This stated that there were 812 patients in the Wells Asylum (333 males and 479 females) and 472 (199 males and 273 females) in the Cotford Asylum. The report added that the Wells Asylum is over-full on the male side and the Cotford Asylum is overcrowded on both sides. The committee recommend the extension of the male side at Wells and a new house for the medical superintendent is to be erected there at a cost of £2879.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Campos da Paz, Professor of Organic and Biological Chemistry in the University of Rio de Janeiro.—Dr. Max Dolega, *privat-docent* of Orthopædics and Medical Gymnastics in the University of Leipsic.—Dr. F. Vizioli, Professor of Neurology and Electro-Therapeutics in the University of Naples.—Dr. Géza Mihálkovics, Professor of Anatomy in the University of Budapest.—Dr. Jos. Majer formerly Professor of Physiology in the University of Cracow.—Dr. R. L. Rea formerly Professor of Surgery in the Chicago College of Physicians and Surgeons.—Dr. Balbiani, Professor of Comparative Embryogenesis in the Collège de France.—Dr. J. Elliott Graham, Professor of Medicine in the University of Toronto.

Medical News.

APOTHECARIES' HALL OF IRELAND.—The following have been successful in the examinations indicated:—

Biology.—E. A. Reilly.
Physiology.—A. J. Barnes and H. W. Mason.
Medical Jurisprudence.—Stafford Adye-Curran, S. W. Battle, M. A. O'Carroll, and James Barnes.
Hygiene.—S. W. Battle and James Barnes.
Pathology.—S. W. Battle, James Barnes, and A. Thompson.

The following have completed the third professional examination:—A. J. Barnes, S. W. Battle, A. Thompson, and M. A. O'Carroll.

Ophthalmology.—William Harding, Frederick Bass, S. W. Battle, and Patrick O'Neill.
Midwifery.—William Harding, M. O'Carroll, S. Battle, and Patrick O'Neill.
Surgery.—M. O'Carroll, S. Battle, Patrick O'Neill, and H. Bass.
Medicine.—M. O'Carroll, S. Battle, and Patrick O'Neill.

The diploma was therefore granted to the following candidates entitling them to practise medicine, surgery, and midwifery:—M. O'Carroll, S. Battle, and Patrick O'Neill.

At the annual meeting of the Governor and Council of the Apothecaries' Hall of Ireland convened by the Act of Incorporation, 1791, held on August 1st the following were duly elected and ballotted for to hold office for the ensuing year ending July, 1900:—Governor: Mr. James Raverty. Deputy Governor: Mr. Hugh A. Auchinleck. Directors: Dr. F. G. Adye-Curran, Mr. John Evans, Mr. W. V. Furlong, Dr. T. D. Finucane, Dr. J. A. Johns, Mr. Robert Montgomery, Dr. Robert J. Montgomery, Dr. R. G. O'Flaherty, Dr. Christopher O'Brien, Mr. James Shaw, Mr. G. S. Stritch, Mr. Samuel M. Thompson, and Mr. C. R. C. Tichborne. Representative on the General Medical Council: Mr. C. R. C. Tichborne. Secretary: Mr. Robert Montgomery.

UNIVERSITY OF EDINBURGH.—The following is the official list of candidates who have passed the first, second, and third professional examinations for degrees in Medicine and Surgery, July, 1899:—

First Professional Examination.—Daniel Allison, J. A. Anderson, G. W. Armstrong, L. H. I. Bell, C. A. Bennet, Bresdalbane Blacklock, T. C. Blackwell, John Brennan, G. M. Brunton, G. G. Buchanan, C. W. Burrows, W. C. Burton, Harry Caird, J. C. G. Carmichael, T. P. Caverhill, R. A. Chambers, H. S. Coghill, A. F. R. Conder, G. M. Coughtrey, C. K. Coutts, A. B. Cox, D. H. Croom, B.A., F. D. Crosthwaite, Robert Crothers, W. B. Cullen, W. H. Cusack, James Davidson, Maurice Davies, A. C. Devereux, J. M. Dewar, C. B. Drew, A. M. Dryden, J. F. Duncan, A. M. Ebden, C. D. Eyles, G. J. Fairie, John Findlay, John Fortune, A. N. Fraser, A. J. Gardner, Laurence Gavin, Jacob George, C. R. Gibson, M.A. (with distinction), F. H. Gibson, J. D. Giles, A. G. Glass, M.A., D. P. Goil, David Golding, A. S. Gordon, Jeanie Gordon, M. H. Graham, Alexander Gray, M.A., Philip Hallam, John Halley, R. L. Henderson, J. O. Heyns, Isabel Hill, A. E. Hodgson, A. O. Hooper, A. F. Hughes, William Hume, John Hunter, J. H. Kay, J. W. Keay, L. A. H. Lack, R. H. S. Langeveldt, John Lauder, J. M. Lovett, J. R. M'Gregor, G. S. Mackay, J. J. M'Millan, J. B. M'Neill, P. W. Mason, J. A. Mathers, A. E. Melville, A. G. M. Middleton, G. H. S. Milln, W. C. Morton, M.A. (with distinction), P. H. Mules, H. L. Munro, William Newlands, M.A., B.Sc., D. M. Newton, Thomas Nicol, D. D. Paton, J. J. N. Pierre, D. E. C. Pottinger, J. A. Pottinger, J. L. Pringle, A. M. Pryce, George Ritchie, E. A. Robertson, W. S. Robertson, W. S. I. Robertson, Amy Robinson, S. M. Ross, J. A. Roux, N. C. Rutherford, F. G. Saleeby, William Sanderson, J. E. Scott, M.A., W. M. Selby, A. M. Sharp, M.A., G. H. Skinner (with distinction), J. H. Smith, E. M. Snowball, Baba M. S. Sodhi, A. W. K. Straton, E. P. M. Stuart, H. R. Vickers, R. M. Walker, W. R. S. Watkins, J. H. D. Webster, D. H. Wessels, H. S. Winterbotham, E. E. Wood, A. C. T. Woodward, G. W. Young, and William Young.

Second Professional Examination.—Old Regulations: Maung Baket, R. A. M. Macleod, W. H. Meyer, A. H. Reid (with distinction), R. S. Williams. New Regulations: May Agnew, G. S. Blandy, V. C. de Boinville, E. S. Brett, A. J. Brock, James Brocket, J. E. M. Brown, William Brown, G. C. Burgess (with distinction), A. W. S. Christie, R. E. Collins, A. P. Coskey, W. J. Crow, John Dalgleish, T. G. B. Dodds, Charles Douglas, J. L. Duncan, John Duncan, W. A. Duncan, William Eggeling, O. J. Evans, J. W. Falconer, A. H. Firth, M.A. (with distinction), G. A. Forrest, E. C. Gimson, E. M. Glanville, M. D. Gulland, James Halliday, William Hamilton, N. C. R. Hansen, A. W. Hauman, P. J. Hay, L. A. Holcroft, A. R. Johnston, M.A., Edgar Jones, W. Landsborough, P. V. Longmore, A. R. Khan Lauddie, E. W. Lewis, Isabella Logie, H. E. M'Cloghry, H. K. Macdonald, Alexander M'Ewan, Wilfrid M'Farlane, N. F. MacHardy, F. D. S. Mackenzie, M. E. Mackenzie, William M'Lachlan, L. A. MacMunn, George M'Neil, R. H. Martin, A. P. G. Masson, E. C. C. Maunsell, Peter Murray (with distinction), William Murray, J. F. Orr, J. L. Palmer, D. E. S. Park, T. S. Paterson, W. S. Patton, J. G. Peebles, J. H. H. Pirrie, B.Sc., L. T. Price, F. L. Rigby, R. A. C. Rigby, W. A. Robinson, Reginald Rorie, Laurence Rundall, T. A. Smyth, H. L. Spark (with distinction), W. C. Speirs, A. J. de Spiganovicz, M. M. Stevenson I. S. Stewart, John Sullivan, H. P. Thompson, T. L. Thomson, P. S. Tillard, W. L. Trafford, A. R. Wallis, H. E. Wareham, Ada Wilkinson, David Young, and R. T. Young.

Third Professional Examination.—Henry Alexander, E. M. Anderson, W. L. G. Anderson, A. A. Ayton, J. H. M. Bell, L. N. Biggs, J. S. Bostock, J. M. Benson, Ewen Cameron, S. M. D. Campbell, Leonard Crossley, G. A. Davidson (with distinction), Archibald Dods, J. P. Douglas, B. G. Forman, Charles Fraser, A. W. Fuller, Norman Glegg, J. L. Green, G. W. Guthrie, C. E. P. Husband, William Hutchison, G. R. Laing, T. G. S. Leary, G. H. Lewis, Elizabeth M'Elney, A. F. Mackay, J. G. Mackenna, L. A. MacMunn, Elizabeth Macrory, M. M. Meikle, J. A. S. Moust, C. E. O'Connor, Peterswald Pattison, C. E. Pepper, P. C. Rayner, J. L. Rentoul, L. C. P. Ritchie, C. H. Ritter, Richard Rutherford, R. A. Savage, H. O. Smith, J. A. Smith, C. E. Southon, H. M. Speirs, G. H. Steven, F. T. Thompson, J. P. Thorne, John Thornhill, G. R. Turner, K. H. H. Uffmann, N. N. Wade, A. S. Watson, A. J. Williamson, J. H. Wrightson, and J. C. Zuldmeer.

FOREIGN UNIVERSITY INTELLIGENCE. — *Baltimore (College of Physicians and Surgeons):* Dr. E. N. Brush has been appointed to the chair of Psychiatry.—*Genoa:* Dr. Stefano Mircoli has been recognised as *privat-docent* of Medical Pathology, Dr. Filippo Nattini as *privat-docent* of Ophthalmology, and Dr. Agostino Sapelli as *privat-docent* of Midwifery and Gynæcology.—*Naples:* Dr. Nicola Fede has been recognised as *privat-docent* of Pœdiatry.—*Rio de Janeiro:* Dr. T. V. Pecegueiro do Amaral has been appointed Professor of Organic and Biological Chemistry in succession to the late Dr. Campos da Paz.—*Sienna:* Dr. L. Frigerio has been recognised as *privat-docent* of Psychiatry.—*St. Petersburg (Military Medico-Chirurgical Academy):* Dr. F. Chistovich has been recognised as *privat-docent* of Pathological Anatomy.—*Würzburg:* Dr. Georg Sommer has been recognised as *privat-docent* of Physiology.

PRESENTATIONS TO MEDICAL MEN.—On July 4th the Lord Mayor of Leeds distributed in the Town-hall the certificates and medallions to the successful members of the city police force in connexion with the examinations of the local branch of the St. John Ambulance Association; and subsequently, on behalf of the police, he presented Mr. G. H. Heald, L.R.C.P. Edin., M.R.C.S. Eng., surgeon and instructor to the force, with a purse of gold, in testimony of esteem and appreciation of his ambulance instructions.—Recently, at the second annual outing of the Chiswick Urban District Council officers, Mr. F. C. Dodsworth, L.R.C.P. Lond., M.R.C.S. Eng., was the recipient of a testimonial consisting of a carriage clock bearing the following inscription: "Presented to Dr. F. C. Dodsworth, medical officer of health, by his brother officers of the Chiswick District Council, as a token of esteem and regard. June 22nd, 1899."—On the occasion, on July 12th, of the distribution, at the National School, Standish, of the certificates and medallions to the successful students attending the ambulance classes in connexion with the Wigan Coal and Iron Company's Standish and Standish Lower Ground pits, Mr. J. H. Wilson, M.D. Durh., the instructor, was presented by the members of the classes, for himself and Mrs. Wilson, with a case of dessert spoons and forks and dinner forks, bearing the following inscription: "Presented to Dr. Wilson by the members of the Wigan Coal and Iron Co.'s Standish and Lower Ground Ambulance Classes, 1899."—The St. Austell (Cornwall) class of the St. John Ambulance Association recently presented Mr. Charles William Seccombe, L.R.C.P. Lond., M.R.C.S. Eng., with a diamond and gold pin in appreciation of his services as honorary instructor of the class.—At the meeting of the members of the St. Mary's (Isle of Scilly) branch of the St. John Ambulance Association held on July 25th the Rev. W. E. Graves, M.A., on behalf of the class, presented Mr. T. Thornton Macklin, M.D., L.F.P.S. Glasg., D.P.H. Cantab., with a carved oak barometer, suitably inscribed, in grateful recognition of his services as honorary lecturer.—On August 3rd, in the Council Chamber, Accrington, Mr. Thomas Joseph Monaghan, M.D. St. And., D.P.H. Vict., the medical officer of health, who is leaving the borough, was presented with a testimonial. For 12 years he had rendered eminent services to the council and to the borough generally. The testimonial consisted of a tea and coffee service, subscribed for by the mayor, aldermen, councillors, and borough officials. The inscription on the service reads: "Presented to Thomas Joseph Monaghan, M.D., D.P.H., by the mayor, aldermen, councillors, and borough officials of Accrington, as a mark of personal respect and appreciation of his services as medical officer of health."

CLAIM FOR MEDICAL FEES.—At the Barry County Court Mr. C. Jones of Penarth recently sued a contractor of Barry for three guineas for medical attendance. Evidence showed that an accident occurred at some cement works and the plaintiff sent for Mr. Jones and instructed him to attend the injured man. The defendant denied giving any instructions, but his Honour Judge Owen gave judgment for the amount claimed with costs.

DR. CHRISTOPHER ADDISON, editor of the *Quarterly Medical Journal*, informs us that all communications should in future be addressed to "The Editor, 7, Leopold-street, Sheffield," and that the journal will in future be issued in the months of November, February, May, and August, instead of in October, January, April, and July, as has previously been the case.

ASSAULT UPON A MEDICAL MAN.—At the Merthyr Tydvil Police-court on July 30th a man, aged 30 years, was summoned for assaulting Dr. H. J. Pechell. While in a state of intoxication he entered Dr. Pechell's surgery for the purpose of begging and resisted the efforts that were made to remove him. The magistrates inflicted a fine of £1 and costs for the assault and also sent him to prison for 14 days for begging.

THE INEBRIATES ACT.—At a recent meeting of the Monmouthshire County Council a discussion occurred upon the question of providing inebriates' homes and the case mentioned in THE LANCET of August 5th (p. 344) was quoted. Eventually it was decided to appoint a committee of five to consult with the Glamorganshire County Council and the boroughs of Cardiff and Swansea for the purpose of appointing a joint committee upon the subject.

YARROW CONVALESCENT HOME, BROADSTAIRS.—The Yarrow Convalescent Home at Broadstairs was visited last week by a party of friends to commemorate the fourth year of its establishment. It was founded in 1895 for the accommodation of 100 children whose parents are refined and educated but who are in reduced circumstances. The institution being fully endowed no subscriptions are asked for nor will they be received. Its usefulness is best indicated by the fact that since its opening 3490 children have been admitted, the average stay being about four weeks, and during the summer months it has always been full. The trustees, however, are anxious that it should be more generally known that the home is eminently adapted for a winter stay. The London office is 73A, Queen Victoria-street, London.

DIPHTHERIA IN LONDON.—In the seventh four-weekly period of the current registration year, that which ended on July 15th, there was a decided increase in the amount of diphtheria notified in London over that recorded in the like preceding period ended on June 17th. Not only so, but the July period was that which has given the highest number of cases notified during the present year, the several totals from Jan. 1st having been 959, 957, 791, 645, 820, 904, and now 1192. A comparison of this July period with that of June shows that whereas in June all save one of the sanitary districts were invaded in July not even one wholly escaped. The weekly average of 226 cases in June was replaced by one of 298 in July. Then, again, in June only three districts had upwards of 50 cases each, with an aggregate of 208, but in July there were nine such districts and their combined cases made a total of 644. No fewer than eight of these districts are in the southern group of sanitary areas. Other nine districts had only 24 cases in all. Yet other five had between 30 and 50 each and a grand total of 196, leaving 20 districts with 328 cases amongst them, or an average of 16 each. Of the 43 sanitary areas the 15 in the southern group contributed 675 cases, or 45 each as an average. The registered deaths in the June period had numbered 110, or 28 per week, against 150 as the corrected average of the corresponding periods of the ten years 1889–98; and the case mortality yielded had been 12·17 per cent. In July the several weeks showed respectively 28 deaths (nine below the corrected decennial average for the corresponding week of 1889–98), 25 (12 below the average), 31 (eight below the average), and 37 (three below the average), and the total was 123, a weekly average of 31, as compared with 153, the sum of the corrected decennial averages. The case mortality yielded was only 10·3 per cent. In the Outer Circle in the June period there were 45 deaths, of which 22 belonged to West Ham registration district. In July the same circle contributed 50 deaths from diphtheria and West Ham district claimed 27 of these. In that region diphtheria has apparently become endemic.

LITERARY INTELLIGENCE.—*El Progreso Médico* of Havana, a monthly journal which ceased to appear for some time owing to the disturbed state of Cuba, has just recommenced under the editorship of Dr. Gabriel Casuso. One of the articles is a notice of Dr. Rafael Cowley y Odero, a well-known physician and medical journalist who fell during the recent campaign. Another article on Elephantiasis of the Upper Limb is accompanied by a striking illustration of a negro whose right hand is affected by the disease in question.

NATIONAL VETERINARY ASSOCIATION.—The annual meeting of this association was held at Plymouth on August 2nd and 3rd under the presidency of Mr. W. H. Blaye, F.R.C.V.S., of Plymouth. The President in the course of an interesting address urged the importance of a veterinary officer for the inspection of meat and added that they had it on the authority of a commission that plumbers, carpenters, printers, bricklayers, and tram-conductors constituted the majority of present-day inspectors of meat. Mr. John Dunstan read a paper on Tuberculosis and its Prevention in Cattle and suggested voluntary and legislative methods of dealing with the disease. Mr. Mathew Hedley of Dublin was elected President for next year and it was decided to hold the meeting in Dublin. There was a reception at the Guildhall, the invitations being issued by the mayor. The annual dinner of the association took place on August 3rd.

KING'S COLLEGE, LONDON.—In the Faculty of Medicine the following prizes, &c., have been awarded:—Recommended for the Associateship: Matthew Louis Hughes. Sambrooke Exhibition: Albert Angelo Myers and Harold Benjamin Day. Medical Entrance Exhibition: Charles Harrison Barber and Herbert Sydney Flook, B.A. Warneford Scholarship: Thomas Henry Jones, John James, and Eardley Lancelot Holland. Senior Scholarship: Not awarded. Second Year Scholarship: Matthew Robert Cecil MacWatters. Junior Scholarships: Harold Benjamin Day and Albert Angelo Myers. Tanner Prize: William Henville Lowman. Todd Prize: Frederick Burroughs Jefferiss. Hygiene Prize, Pathological Anatomy Prize, Obstetric Medicine Prize, and Medicine Prize: Arthur Edmunds. Surgery Prize and Clinical Surgery Prize: William Henville Lowman. Professor Rose's Surgery Prize: Victor Richard F. Kroenig. Anatomy Prize: Edward Augustine Bell. Physiology Prize: John Alexander Drake. Chemistry Prize: Matthew Robert C. MacWatters and William Wellesley Campbell. Materia Medica Prize: Matthew Robert C. MacWatters.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Vaccination Prosecutions.

Mr. PICKERSGILL has notified that during the next session of Parliament he will introduce a Bill to declare that no prosecution under the Vaccination Acts can be commenced by the vaccination officer without the consent of the board of guardians.

HOUSE OF LORDS.

THURSDAY, AUGUST 3RD.

Companies and Medical Practice.

On the occasion of the third reading of the Companies Bill the LORD CHANCELLOR explained that the Select Committee which had been considering the Bill had inserted in it clauses with reference to medical practice and the practice of pharmaceutical chemists. The effect of these clauses, his lordship said, was to provide that a company could not be formed to do that which a private individual was not permitted to do without examination and qualification. It is understood that the Bill will be proceeded with next session.

HOUSE OF COMMONS.

THURSDAY, AUGUST 3RD.

Rabies.

Mr. WHITMORE asked the President of the Board of Agriculture what progress had been made with the extirpation of rabies in England since his last statement; and whether he could now say when it would be practicable and expedient to revoke the muzzling orders which were

still in force.—Mr. LONG replied: Perhaps I may be allowed to give the number of cases of rabies which are known to have occurred in Great Britain since 1896, the year prior to the commencement of our operations against the disease. In that year 438 cases were confirmed; in 1897, 151 cases; in 1898 17 cases; and during the present year, so far as it has gone, only one case has been confirmed. With regard to the revocation of the muzzling orders we have now made arrangements for obtaining the same security against the introduction of the disease from Ireland as exists in the case of foreign countries and so soon as these arrangements are in effective operation I hope to be in a position to withdraw the orders from the Midland and West Riding areas, to be followed at no distant date by the revocation of those in force in Lancashire and the metropolitan area, if no further cases occur.

Tuberculosis.

Mr. CHANNING asked the President of the Board of Agriculture whether he now proposed to take any steps to give effect to the recommendations of the Commission on Tuberculosis as regards what the Commission held to be the most important part of the inquiry, the elimination of the disease by the provision of guaranteed tuberculin, and the services of qualified veterinary surgeons gratuitously or otherwise; and whether, in any case, the Board of Agriculture would prepare and distribute a clear and concise statement of the method of elimination which was recommended by the Commission and of the results of the adoption of this method in Denmark and other countries, and on certain estates in the United Kingdom.—Mr. LONG: Since the hon. Member last called my attention to the recommendations of the Commission on Tuberculosis nothing has occurred which would suggest that there is any general desire on the part of agriculturists that the Government should gratuitously provide tuberculin and the services of a veterinary surgeon for the purpose of enabling stockowners to test their animals for tuberculosis, and in these circumstances I could not fairly ask the Treasury to supply funds for the purpose. With regard to the issue of literature on the subject I may remind the hon. Member that the Royal Agricultural Society recently gave extensive circulation to a very concise and practical leaflet, but I propose during the recess to bring up to date our information as to the methods of dealing with the disease and the results obtained in Denmark and other countries, so as to enable me to determine whether we can usefully supplement the particulars already in the possession of agriculturists on the subject.

The Operation of the New Vaccination Act.

Sir WALTER FOSTER asked the President of the Local Government Board if he could state the amount of vaccination which had been performed during the first six months of this year under the provisions of the Vaccination Act of last year as compared with the amount of vaccination which was performed during the first six months of last year.—Mr. CHAPLIN: The returns which I have obtained up till now show that the total number of certificates of successful primary vaccination received by the vaccination officers during the first six months of the present year was 353,992 as against 277,821 in the first six months of 1898—that is to say, there has been an increase of upwards of 76,000 primary vaccinations or of more than 27 per cent. in the first six months of the present year as compared with the corresponding period of 1898. I think it is right that I should add that these results have been obtained in the first six months of the Act notwithstanding the difficulty of giving effect to an entire change of method throughout the country from stational to domiciliary vaccination and also in spite of the fact that in numerous cases there was very considerable delay in the fixing of fees and in the appointment of officers and that in some cases, such as Leicester for instance, the necessary appointments are not even made yet.

The Treatment of Criminal Lunatics.

Mr. ARTHUR O'CONNOR asked the Home Secretary if he had yet had an opportunity of considering the representations of the Lunacy Commissioners with regard to the increasing numbers of criminal lunatics in county and borough asylums, and to the hardship which the practice inflicts upon the ordinary patients, and the indiscipline and danger which it involves; whether Broadmoor was fully occupied; and whether further accommodation could be furnished so as to enable criminal lunatics to be treated elsewhere than in ordinary asylums.—Sir MATTHEW WHITE RIDLEY: The question of providing additional accommodation for criminal lunatics is engaging my serious attention, and inquiries are now in progress with a view to obtaining a site for the building of a new criminal lunatic asylum. I propose in the course of the autumn to make the necessary application to the Treasury. The male accommodation at Broadmoor is fully occupied, but there are still vacancies for females at that establishment. It is intended that accommodation in the new asylum shall be provided both for male convicts becoming insane as well as the other more serious cases of criminal lunatics, but of course it will in no case be possible to relieve altogether county and borough asylums from their statutory obligation to receive criminal lunatics.

MONDAY, AUGUST 7TH.

Disease among Soldiers in India.

Mr. PIRIE asked the Secretary of State for India if he was aware of the unreliability of the stated ages of British soldiers and that in a recent experiment as to verification of their ages accurate information could only be obtained in about 50 per cent. of cases; whether, in view of the increasing prevalence of enteric fever in India, as well as to the prevalence of other terrible diseases among our troops in India, he would take steps on behalf of the Indian Government that the regulations as to the age of 20 years, under which no British soldier was supposed to be sent to India, should be strictly observed; and whether he would in future require that every British soldier accepted for service in India by the Indian Government should produce conclusive proof, by birth certificate or otherwise, that he was of the actual age stated on his attestation papers and thus diminish the excess of fatality existing at present from the exposure of immature men to the ravages of those diseases.—Mr. GEORGE WYNDHAM, Under Secretary of State for War, replied: Every care is taken to observe the rule that no soldier less than 20 years old shall be sent to India. No soldier is allowed to embark unless after medical examination he is declared fit to serve in that country.

The Leicester Board of Guardians.

On the second reading of the Appropriation Bill Mr. HENRY BROADHURST said that he desired to take the opportunity of making a last appeal to the President of the Local Government Board to suspend the proceedings against the Leicester Board of Guardians. He assured the right hon. gentleman that the guardians had been elected to prevent all forms of public vaccination and that if they were to appoint a vaccination officer he would have nothing to do except to draw his salary. If the right hon. gentleman carried his policy to the bitter end, he would have to accommodate in prison 45 guardians, six of whom were ladies, and if other guardians were elected to take their place, they would act in the same way as their predecessors, and in course of time the whole population of Leicester would be requiring prison accommodation.—Mr. HAZELL, supporting the appeal, said that he was not there to defend the guardians, but he warned the President of the Local Government Board that if he persisted in his present course he would bring disaster to the cause he had at heart—namely, the extension of vaccination.—Mr. CHAPLIN said that it was impossible for him to stay proceedings, because the matter had passed out of his hands. He understood that the guardians had not yet agreed to obey the order of the High Court. This was a matter with which he had nothing to do and which must be decided between the High Court and the guardians. The question at issue was not the question of compulsory vaccination, because that question had been decided last year. The issue was that the guardians by refusing to appoint the necessary officers were doing their best to prevent facilities being given to those who desired vaccination. Leicester as a matter of fact was the only locality which had refused to apply the law, and although there might be no small-pox there at present an outbreak might very well occur there as at Gloucester. It certainly was far from being the case that nobody in Leicester desired vaccination. In the first six months of 1898 the vaccinations in Leicestershire, in which the town was included, were 234, but in the first six months of the present year they were 1977. The plain fact was that the Leicester Guardians had deliberately set themselves in defiance of the law and in doing this they were impeding and preventing people who desired vaccination from availing themselves of it.

TUESDAY, AUGUST 8TH.

The Contagious Diseases Act in Cape Colony.

Mr. HENRY J. WILSON asked the Secretary of State for the Colonies whether he was aware that girls of 12 and 14 years of age had undergone examination several times in Capetown under the Contagious Diseases Acts; whether he could state under what Act of the Cape Legislature such examinations could be enforced in regard to girls of these ages; whether a magistrate suggested that criminal prosecutions should be instituted against persons who would pass such children; and under what Act, if any, such criminal prosecutions could be instituted.—Mr. CHAMBERLAIN replied: The hon. Member has called my attention to a report in a Cape newspaper of a case in which two girls of the ages of 12 and 14 years were charged with soliciting, and it was stated that they had been several times examined at the Lock Hospital. The magistrate is reported to have made the remark quoted in the question. The Contagious Diseases Prevention Act of the Cape Colony (No. 39 of 1885) does not specify any limit of age for persons to be examined. I do not know whether any such prosecution as the magistrate suggested could be instituted.

The Vaccination Question.

Mr. LABOUCHERE asked the President of the Local Government Board whether he had received complaints from public vaccinators with reference to the effect of the glycerinated calf lymph supplied from the laboratory of the Local Government Board and what action he proposed to take in the matter; whether his attention had been called to the decision of the magistrates in Derby who had dismissed summonses against defaulters under the Vaccination Act in consequence of the prosecutions not having been sanctioned by the guardians; and whether, under these circumstances, he would reconsider his position in respect of the powers of vaccination officers to institute proceedings without this sanction.—Mr. T. W. RUSSELL replied: The Local Government Board have received many statements as to the satisfactory results of the glycerinated calf lymph issued by them, but during the present hot weather there have been some communications as to want of uniformity in the results obtained. There is reason to believe that this want of uniformity is largely due to some change which the lymph has recently undergone owing to the great variation between the temperature at which it is kept in the laboratory and that to which it is exposed after issue. The occurrence, which is believed to be temporary only, is receiving very careful investigation with a view to its prevention. My right hon. friend's attention has been called to the decision of the Derby magistrates referred to in the second paragraph. The magistrates do not seem to have had before them the circular issued by the Board to the guardians, in which it was explained that the power and the duty of taking such proceedings are vested in the vaccination officer under the Vaccination Acts passed prior to the Act of 1898 without any order of the Board or direction from the guardians, and they appear to have given their decision under a misapprehension. There is no reason for reconsidering the position in respect of the powers of vaccination officers to institute proceedings.

Sir WALTER FOSTER asked the President of the Local Government Board (1) whether his department had been able regularly to meet the demand for glycerinated calf lymph during the past half-year; (2) whether the demand had increased from month to month; (3) whether the public vaccinators had been satisfied with the efficacy of the lymph supplied; and (4) whether he was likely at an early date to be able to supply the lymph for the use of private practitioners.—Mr. T. W. RUSSELL: The reply to the first paragraph is in the affirmative. It was originally estimated that a supply of 1000 tubes of lymph would meet the requirements of public vaccinators, but the demand steadily increased until in one week it reached 2287 a day. During the last two months the issue has averaged 1790 a day. I have replied to the third paragraph in the answer I have given to the question put to me by the hon. Member for Northampton. I cannot at present make any promise as to the supply of the lymph for the use of private practitioners.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ALLDRIDGE, W. E., M.R.C.S., has been appointed Resident Surgical Officer to the Birmingham General Dispensary.

BEATTIE, G. W., M.D. Aberd., C.M., has been re-appointed Medical Officer of Health by the Failsworth District Council.

CRAIG, A. B., M.D., C.M. Glasg., has been appointed Medical Officer of Health by the Church District Council.

CROMPTON, H. J., M.B., B.Ch. Vict., has been appointed Senior House Surgeon to the Ancoats Hospital, Manchester.

DENT, E. A., M.B., C.M. Edin., has been appointed Medical Officer of the Cheltenham Provident Dispensary, vice S. T. Pruen, resigned.

GREENHALGH, A., M.B., Ch.B. Vict., D.P.H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Accrington, vice T. J. Monaghan, resigned.

KELLY, CHARLES E. M., M.D., M.S. Lond., F.R.C.S. Eng., has been appointed District Surgeon to the City of London Lying-in Hospital, City-road, E.C.

MELLING, W. T., M.B., B.Ch. Vict., has been appointed Junior House Surgeon to the Ancoats Hospital, Manchester.

MONDY, S. L. CRAIGIE, M.R.C.S., L.R.C.P. Lond., has been appointed Deputy Certifying Surgeon for the Poole District, Dorset, vice B. M. Bond.

MOORE, H. C., M.R.C.S., has been appointed, *pro tem.*, Medical Officer of Hereford.

NUTTALL, T. E., M.B., C.M. Edin., has been appointed a District Medical Officer of the Haslingden Union by the Haslingden Board of Guardians, vice T. J. Monaghan, resigned.

RIMMER, J. F., M.B., Ch.B. Vict., has been appointed Resident Assistant Medical Officer for the Workhouse, Birkenhead.

SAYRES, A. W. F., M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Public Vaccinator for the Woodford District of the West Ham Union.

WILKINS, T. HALFORD, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Surgical Officer to the Birmingham General Dispensary.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50 per annum, with board, &c.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £50, with board, residence, and laundry. Applications to the Hon. Sec., 20, Chapel-street, Liverpool.

BRIGHTON, HOVE, AND PRESTON DISPENSARY (NORTHERN BRANCH).—House Surgeon. Salary £140 per annum, with furnished apartments, coals, gas, and attendance.—Apply to the Assistant Secretary, 113, Queen's-road, Brighton.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon for twelve months. Salary £80 per annum, with board, residence, and washing.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, to reside and board in the hospital, unmarried. Salary £80.

DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Salary £100 with board and lodging.

DURHAM COUNTY ASYLUM, Winterton, Ferryhill.—Assistant Medical Officer, unmarried. Salary £120, with apartments, board, and attendance.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

FINSBURY DISPENSARY, Brewer-street, Goswell-road, London.—Resident Medical Officer. Salary £120 per annum, with a furnished residence in the institution, attendance, coals, and gas.

GENERAL HOSPITAL, Birmingham.—House Surgeon for six months. Residence, board, and washing provided. Also two Assistant House Physicians for six months. Residence, board, and washing provided.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Physician.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board, lodging, and washing. No stimulants found.

GUY'S HOSPITAL MEDICAL SCHOOL, London, S.E.—Demonstrator of Chemistry and Physics. Apply to the Dean.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the institution.

MANCHESTER ROYAL INFIRMARY.—Medical Registrar (non-resident). Salary £70 per annum.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House Surgeon. Salary £120 per annum, increasing conditionally by £10 per annum, with furnished apartments, board, and washing.

OXFORD EYE HOSPITAL.—Honorary Assistant Surgeon.

PADDINGTON, London.—Assistant to the Medical Superintendent of the Infirmary, and Assistant Medical Officer of the Workhouse, unmarried. Salary £100 per annum, rising yearly by £10 to £120, with board, lodging, and washing. Personal application to the Medical Superintendent at the Infirmary, 285, Harrow-road, W.

ROCHDALE INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £90 per annum, with board, residence, and laundry.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 per annum, with furnished quarters, board, washing, and attendance.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—House Surgeon for twelve months. Salary £80, with board, lodging, and washing. No stimulants.

ROYAL BERKSHIRE HOSPITAL, Reading.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—House Surgeon and Assistant in the Dispensary for one year. Salary of House Surgeon £50, with board, and salary of Assistant in the Dispensary (non-resident) £80.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

SOUTHPORT INFIRMARY.—Resident Senior House Surgeon. Salary £80 per annum, all found.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne.—Lecturer in Midwifery and Diseases of Women and Children.

VICTORIA HOSPITAL, Folkestone.—House Surgeon. Salary £80 per annum, rising to £100, with board, residence, and washing.

VICTORIA HOSPITAL FOR SICK CHILDREN, Park-street, Hull.—Lady House Surgeon. Salary £50 per annum, with board and laundry.

WARRINGTON INFIRMARY AND DISPENSARY.—Junior Resident House Surgeon, unmarried. Salary £100 per annum, with furnished residence and board.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

OSBURN.—On July 20th, at Bagshot, Surrey, the wife of Harold Burgess Osburn, M.R.C.S., of a son.

PEAKE.—On August 4th, at the Limes, Marden, Kent, the wife of W. H. Peake, M.D. Durh., B.S., of a son.

RAYNER.—On August 5th, at Harcourt House, Camberley, Surrey, the wife of Herbert E. Rayner, F.R.C.S. Eng., of a daughter.

WEBBER.—On August 6th, at Berwyn, Madeira-avenue, Worthing, the wife of William Littleton Webber, F.R.C.S., of Holland-road, Kensington, of a son, stillborn.

WREFORD.—On August 2nd, at 59, Osborne-road, Newcastle-upon-Tyne, the wife of John Wreford, M.B., B.Hy., L.R.C.P., M.R.C.S., of a daughter.

MARRIAGES.

BENTON—LINGWOOD.—On August 3rd, at West Ham parish church, William Benton, Surgeon, of Raymond House, Plashet-road, Upton-park, to Annie Louisa, widow of the late Dr. E. H. Lingwood.

POLLARD—JOHNSON.—On August 8th, at All Saints', Ryde, Fleet-Surgeon E. R. H. Pollard, Royal Navy, of H.N. Hospital, Hawlbowline, Queenstown, to Mary Emma, only daughter of Captain W. J. Johnson, Royal Navy, of Seafield House, Ryde, I.W.

WILLIAMS—HARVEY.—On August 3rd, at the parish church, Hampstead, Alfred Henry Williams, M.D., of Harrow-on-the-Hill, to Lucy Caroline Simpson, second daughter of Captain Frederick Harvey, R.N., of Lithos-road, Hampstead.

DEATHS.

BOOTH.—On August 6th, at Church House, Chesterfield, Charles Booth, M.D., J.P., aged 73 years.

BURN.—On July 31st, at Edinburgh, George Burn, M.D., of Latheron, Caithness.

RATWELL.—On Aug. 7th, at Church-road, Upper Norwood, in his 80th year, William Coverdale Beattie Ratwell, M.D., of Marina, St. Leonards, late Surgeon-Major, Indian Medical Service.

MEADOWS.—On Aug. 2nd, at Lancaster-road, South Norwood, from the result of an accident, Brigade-Surgeon-Lieutenant-Colonel C. J. W. Meadows, H.M. Bengal Army, retired, aged 55 years.

RICHARDSON.—On August 4th, at Melville-street, Edinburgh, Deputy-Inspector-General William Richardson, R.N. (retired).

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A PUZZLE.

WE have received the following letter. It is headed, "From Dr. E. Berdoe, Tynemouth House, Victoria-park-gate, London, N.E.," and is signed "Edw. Berdoe, M.R.C.S., L.R.C.P. (Ed.)" If it were not that his communication contained more important matter for debate it might be worth while to ask Mr. Berdoe why he styles himself "Dr." But to his letter, which is as follows:—

To the Editors of THE LANCET.

GENTLEMEN,—The enclosed advertisement from the *Morning Post* of August 2nd, 1899, seems to call for some inquiry as the advertiser is evidently in possession of some valuable knowledge in the treatment of disease which he would, no doubt, communicate to his profession if invited.

Yours, &c.,

August 8th, 1899. EDW. BERDOE, M.R.C.S., L.R.C.P. (Ed.)

The following is the advertisement enclosed in Mr. Berdoe's letter:—

CONSUMPTION.—An absolute and speedy CURE for this deadly malady having been recently discovered after long special study and experiment, first at the General Hospital of Vienna (the largest in the world), and subsequently at the Pasteur Institute in Paris, sufferers are invited to unhesitatingly call at the undermentioned Consulting Rooms, where they may with every confidence and certainty apply for and obtain that relief which is so necessary to the preservation of their lives. Improvement immediately begins with the first treatment, and is constantly maintained until cure is assured. The treatment itself requires only a few minutes each day, without interfering with the patient's occupations and there is no longer any necessity for him to go abroad. Persons suffering from any form of tubercular disease, such, for instance, as affects the bowels, glands, joints, bones, and larynx, can all be successfully treated with the new discovery, and with the absolute certainty of present relief and final cure. Free consultation, daily (except Saturday), between eleven and four.—Consulting Rooms, Thackeray-mansions, 52, Oxford-street, W.—Dr. J. B. Cunningham.

We cannot make up our minds if Mr. Berdoe is making game of us or is serious in recommending to our notice this advertisement which is the most ordinary sort of bait set by a quack to catch the attention of ignorant people. Has he caught Mr. Berdoe's attention? Does this gentleman, a duly qualified medical man, really believe that the advertiser knows anything worth the while of the medical profession to learn? Surely the extravagance of his claims and the way in which they are made can leave no doubt in the mind of any of our readers as to the kind of person the advertiser is. Tuberculous disease of the larynx (say) cured by a treatment which lasts only a few minutes each day, the improvement beginning at once!

We cannot oblige Mr. Berdoe by giving "Dr." Cunningham a moment's serious thought.

"THE REPAYMENT OF INCOME TAX."

To the Editors of THE LANCET.

SIRS,—Will you allow me to state in answer to your correspondent "S." that he cannot do better than apply to the Income Tax Repayment Agency, of 6, Chichester-road, Paddington, W. I have employed them for many years and have always found them most obliging, and not only that but very moderate in their charges. My attention was first called to the firm from your mentioning that they had issued special balance-sheets for the use of medical men.

I am, Sirs, yours faithfully,

GEO. OWEN MEAD, L.R.C.P. Edin., M.R.C.S. Eng.

Newmarket, August 8th, 1899.

*** Other correspondents reply to "S." (see THE LANCET, August 5th, p. 393) to the following effect:—The Income Tax Adjustment Agency, 12 and 13, Poultry, E.C., will advise any tax-payer gratuitously whether he can make a claim for repayment of income tax. A stamped envelope should be enclosed and full particulars of income and past payments should be given.—ED. L.

SOME POINTS IN A CLUB PRACTICE.

To the Editors of THE LANCET.

SIRS,—I am a general medical practitioner of nearly 30 years' standing, and fortune, if I may call it so, has fixed my life in a town of 60,000 inhabitants, of which number nine-tenths are working-class, that is, have to earn their living in factories or workshops, and the rate of wages in this district is not high. Now, nearly all the men and boys in this district are members of one or other of the friendly societies, even down to the age of babies. So far the friendly societies in this district have not formed any branch for females. The scale of fees paid to the medical officers varies from 3*s.* 6*d.* down to 2*s.* 6*d.* for adults and 1*s.* 6*d.* for children per annum, and the medical officers have to provide medicine and visit all patients within a radius of three miles belonging to these societies. Two years ago some of the friendly societies paid 4*s.*, but these have now all been reduced to 3*s.* 6*d.* and 3*s.* The work in this district is fitful and the wages are fluctuating, consequently the members of these societies often lapse and fall out of benefit, and if the member who has lapsed happens to be over the age for rejoining, and possibly suffering in health at the time from chest affection (to which the trade in this neighbourhood largely conduces) then this member is at a loss in many ways. First, he loses his club pay when ill; then he loses his medical attendance and must become either a pauper or be compelled to run up a bill for medical attendance which both he and the medical man know that he can never pay; or he must suffer for want of proper medical attendance and bear his illness in silence. Now I presume to suggest, after 15 years' trial as medical officer to one of the medical aid societies, that these medical aid societies do afford the help such cases are in need of, and I have advised scores and hundreds of poor people to join the one I am officer to rather than run up bills which they cannot pay. By so doing I have saved them lots of trouble and recouped myself for my trouble. I may say here that although I have a list of over 400 members in the society to which I am medical officer not one of them is in a position to pay a large bill and my name is not mentioned by canvassers. Now for the remuneration. I am paid 4*s.* per annum for every man, woman, and child, and am not required to go beyond one mile from my surgery; and if by any chance a person presented a card whom I judged to be able to pay a bill I should immediately refuse to attend him and at once write to the head office and give my reason, and when I mention that I have only had occasion to do so twice in 15 years I think that speaks well for the society. Again I receive from this society my cheque on the quarter-day. There are no deductions for annual membership and no percentage expected to be returned to the secretary and treasurer when the bill is paid and no bringing you up before the lodge because you did not go back with the messenger to see a man with toothache or some other trivial illness, and there is no need to keep a horse and trap to go and visit patients living three miles away; and yet, because the General Medical Council has decided that holding such appointments is infamous conduct, I am expected to give up the post. May I ask will you tell me what I am to say to the hundreds who have joined on my own suggestion, what I am to say to them, and how are they to be dealt with? I have a strong repugnance to go back to the old style of entering their accounts knowing that it means either no pay or the bill being put into the county court and selling them up, which is not to my mind a satisfactory proceeding. I also ask you to compare the fees paid and judge for yourself which is the most satisfactory. Again, I would say that if the excuse is brought forward that the members of the friendly societies are examined prior to admission—that by no means prevents the members from being very troublesome. Having a list of 800 members of friendly societies to attend and 400 medical aid I do not hesitate to say that for every five of the latter I attend 15 of the former (per cent.). I consider that the members of friendly societies are unjust and exacting and also unwilling to pay a fair price. And not only so, but there being no wage limit those who are well-to-do in this world's goods and yet members of friendly societies make unreasonable demands when ill and expect as much attention as if paying a proper fee. Calculate out the price at 2*s.* 6*d.* a year (a little over a halfpenny a week) and 3*s.* 6*d.* (a little over three farthings, about the price of half a glass of beer) and it is for this that educated men are to give their services. I must apologise for the length of this letter, but I should like an expression from your readers if you will kindly publish this.

I enclose my card and am, Sirs, yours faithfully,

MEDICAL PRACTITIONER.

MEDICAL SICKNESS ASSURANCE.

To the Editors of THE LANCET.

SIRS,—I have made considerable search for the address of a medical sickness assurance association which I have some reason to believe has been established in London, or at least in England, for some time, and for the address of a Scottish association recently begun, without success. Could you without much trouble give at convenience these addresses? They might be useful to others besides

Your obedient servant,

August 3rd, 1899. QUAERITE ET INVENIETIS.

*** Probably our correspondent is referring to the Medical Sickness and Accident Society (Secretary, Mr. F. Addiscott), 33, Chancery-lane, London, E.C. Perhaps some of our readers can supply the address of the Scottish Society.—ED. L.

"THE JUST POSITION OF BACTERIOLOGY."

A MR. MAURICE L. JOHNSON sends a letter to the *Echo* concerning what he terms "our *fin de siècle* devotees of the microbe and inoculation doctrine." His letter is headed "Exit the Microbe" and is of the stuff which no medical man thinks of answering and which we as a rule disregard, for to notice such rubbish is to give it importance. Why then, it may be asked, refer to this particular communication? The answer is, because of the signature. Mr. Maurice L. Johnson's

name struck us as being familiar and we find that a person bearing this name wrote to the lay press in the early part of this year (see THE LANCET, March 11th, 1899, p. 740) under circumstances which should be recalled. A physician, now dead, whom we will call Dr. A, in a communication to THE LANCET, reflected upon the undue importance that was in his opinion attached to bacteriology, and then went on to quote certain words of Professor Virchow, concluding with a eulogy of Virchow. Mr. Maurice L. Johnson—perhaps this Johnson and perhaps not—was inspired by Dr. A's paper to write to the lay press and in so doing calmly fathered the remarks of Dr. A, derogatory as he conceived them to bacteriology, upon THE LANCET and, not content with this, transformed Dr. A's eulogy of Virchow into THE LANCET's eulogy of Dr. A. We recommend the *Echo* to be cautious before publishing the writings of a contributor with such a genius for inaccuracy.

A MEDICAL OFFICER OF HEALTH ON THE DIAGNOSIS OF DIPHTHERIA.

THE *Cornishman* of July 29th, 1899, contains the following brief account of a monthly meeting of the sanitary section of the Helston Rural District Council:—

> "Mr. Haswell, medical officer of health, presented his report for the month, in which he stated that the number of births was 40, giving a birth-rate of 2·1, and the number of deaths was 21, giving a death-rate of 1·1. There had been no death from any zymotic disease, two deaths were of children under five years of age, and nine of persons over 65. There had been three cases of diphtheria at Breage and all the necessary precautions had been taken to prevent the spread of the disease. With this exception the health of the district was very good.—Rev. J. Barnes said the children named who were suffering from diphtheria at Breage were running about the roads and if they suffered from anything it was from toothache. (Laughter.)—The Medical Officer said his attention was called by another medical man to the fact that the children were suffering from diphtheria and he could not question his judgment. The cases were certainly of a very mild type.—Rev. J. Barnes: Yes; very mild.—Mr. Kempthorne asked what diphtheria was?—The Medical Officer said that depended on the conscience of the doctor certifying. (Laughter.) He had known cases where the doctor had said it was diphtheria and it was found afterwards it was not that disease.—Rev. J. Barnes said the occurrence was an occasion for laughter among the Breage people.—A councillor said if the certifying doctor had had to pay the 2*s.* 6*d.* instead of receiving it, the cases would not have been diphtheria.—The Medical Officer said he had given orders for the children to be kept indoors, but it would take them all their time to watch them. If any person who had seen them outside would come forward and substantiate the charge the authority could then prosecute.—Rev. J. Barnes said the children were under five years of age. On one occasion he saw them sitting on a mound watching a funeral. They were surrounded by a crowd of other children.—Mr. Kempthorne asked if they had received any medical treatment?—The Medical Officer said he did not know.—Mr. Pryor asked if this was the first mistake this certifying medical man had made? In a case before he had certified as diphtheria whereas it was toothache. (Laughter.)"

We do not think well of the attitude taken up by the medical officer of health who, in spite of his statement that he could not question the judgment of another medical man, certainly threw doubt upon the diagnosis of diphtheria. If the report is correct in attributing to him the words and sentiments that the certification of diphtheria "depended on the conscience of the doctor certifying" he has insulted his profession and given "a councillor" the right to insult the medical profession also by expressing his belief that a certifying medical man values 2*s.* 6*d.* more than he does his honesty.

A WARNING.

To the Editors of THE LANCET.

SIRS,—A woman, signing herself "E. M. Iselton" and sometimes "Etheridge," has been lately appealing to members of the medical profession in very urgent letters asking for the means to relieve "with proper nourishment" a medical man who is sometimes referred to as her husband and occasionally as her *fiancé* and who is in "great need and rapidly sinking." Recipients of such appeals should refer to the Charity Organisation Society at the address below.

I am, Sirs, yours faithfully,

C. S. LOCH, Secretary.

Charity Organisation Society, 15, Buckingham-street, Adelphi, W.C., August 9th, 1899.

ACHONDROPLASIA.

IN answer to *Pathologist* who writes that he would be glad of reference to the literature of "Achondroplasia" and information as to (1) the number of cases known; (2) its occurrence in more than one member of a family; (3) the amount of growth that may be expected; and (4) the value of treatment by thyroid, we may say that the literature of achondroplasia is not extensive; the following are the most important items:—Porak: Nouvelles Archives d'Obstétrique et de Gynécologie, Paris, 1889, iv., p. 551; 1890, v., pp. 19, 60, 133, &c. Bulletin et Mémoire de la Société Obstétrique et Gynécologie de Paris, 1890, p. 234, &c. A. E. Garrod: Transactions of the Clinical Society of London, vol. xxxi., p. 294. John Thomson: Edinburgh Medical Journal, 1893, p. 1109. In this last article several references are given. Kaufmann has also written on the subject, but we are unable to put our hand on the reference. We regret that we are unable to give categorical replies to questions 1, 3, and 4. In reply to question 2, we refer "Pathologist" to the cases recorded by Dr. Thomson; two of these were brothers.

THE SMELLS OF LONDON.

A CORRESPONDENT writes:—

> "For several weeks past a sickening, insufferable stench prevails close to South Bermondsey Station, so abominable that the passengers by trains have to hold their nostrils till they pass out of this infected area! Can there be a form of nasal atrophy peculiar to our sanitary inspectors that such stenches are tolerated? Daily through our principal thoroughfares vehicles are permitted to convey the most offensive fish and animal refuse without the slightest attempt at deodorising, or even securing against the dissipation of these disease-bearing smells. The police seem powerless to help a sufferer as they cannot arrest a stench or submit a sample of it to the magistrate."

Our correspondent has our sympathy in his complaint. We have several times commented in these columns upon the iniquity of allowing carts for the collection of fat and wash, to say nothing of stinking bones and other offal, to go about the streets all day long, but until a county councillor or some one else in authority has died from poisoning contracted through filth we see but little hope that anything will be done to obviate the abominable nuisance complained of.

TRAINING FOR DISPENSING.

To the Editors of THE LANCET.

SIRS,—Can any of your readers tell me the least expensive way to train a lad to become a qualified dispenser? Education only fair.

I am, Sirs, yours faithfully,

August 9th, 1899. A DOCTOR'S WIFE.

"BIRDS OF A FEATHER."

WE have received a letter from "V. B. F." emphatically denying the statements in the letter of "One who Knows" which appeared in our issue of August 5th. We then said that "this correspondence cannot be continued in our columns" and to this decision we must adhere, although we think it fair to make the above announcement.

Somerset.—We cannot give legal advice. We can only express our opinion that our correspondent, who has been treated with discourtesy and want of consideration, should be properly compensated for his trouble and in lieu of notice by being paid on the higher scale. He must of course consult a lawyer before taking any proceedings, when he will probably be told that his legal position is not a clear one and that he has as much chance of losing his case as of winning it

C. M. (Sandown).—Our correspondent will find most of the information which he requires in a paper by Surgeon-Major Bolleau, published in THE LANCET of April 10th and 17th, 1880, and entitled "A Medico-Topographical Reminiscence of the West Indies." There is also a very good book by J. C. Phillipps published in 1876, entitled, "The Climate of Jamaica." Apparently the last epidemic of yellow fever occurred in 1867, when there were 29 deaths.

Orthodox.—We do not commend the circular, but the correspondent seems to see more harm in it than we do. The examination is made for the satisfaction of the school rather than of the scholar, and it might be argued that the school should pay the fees. Then the school would have the right to do more than suggest a physician: it could nominate one.

A Beginner.—The situation often arises. We recommend a beginner not to apply for a post held by a brother medical man until he knows that the present holder does not value the position. He should not offer himself for election without notifying the present holder or save in response to a strongly expressed local desire that he should be elected.

T. W. T. S. must first provide himself with witnesses who are ready to testify to the occurrence of the misrepresentation. When he is fortified with these if he will make a statement to us we will advise him. He must be able to show that the behaviour complained of is habitual.

E. L. (Ealing) should consult the Medical Directory. We do not know of such a practitioner in the neighbourhood.

W. H.'s letter has been received.

During the week marked copies of the following newspapers have been received: *Scotsman, Warrington Observer, Morning Herald, Sheffield Daily Telegraph, Morning Leader, Blackburn Daily Telegraph, Sussex Daily News, Stalybridge Herald, Lincoln Leader, Staffordshire Chronicle, Birmingham Daily Post, Leicester Daily Post, Weekly Sun, Hastings Times, Southampton Times.*

Burnley Gazette, Swinton Times, Manchester Guardian, Herald (Barrow-in-Furness), Western Morning News, Builder, Bath Daily Chronicle, Gazette (Middlesbrough), Brighton Gazette, Architect, Public Health, Times of India, Pioneer Mail, Shipley Times, Yorkshire Post, Bristol Mercury, Liverpool Daily Post, Sydney Mail, Leeds Mercury, Literary Digest, Sydney Daily Telegraph, Sanitary Record, East Anglian Daily Times, Public Health Engineer, Mining Journal, City Press, Reading Mercury, Hertfordshire Mercury, Local Government Journal, Surrey Advertiser, Herne Bay Argus, China Mail, Local Government Chronicle, Woking News and Mail, English Mechanic, Champion, Bo'ness Journal, South London Press, Leytonstone Express, Accrington Observer and Times, Salisbury Express, York Daily Herald, New York Herald (Paris), Selby Times, Rugby Advertiser, Bradford Observer, &c., &c.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 10th, 1899.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Rad a in Vacuo.	Max'mum Temp. Shade.	M n. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Aug. 4	29·96	S.E.	...	117	76	63	64	68	Cloudy
,, 5	29·85	S.E.	0·07	120	82	63	64	68	Cloudy
,, 6	29·96	S.E.	0·04	92	73	63	66	69	Cloudy
,, 7	29·97	S.E.	...	103	72	62	62	64	Overcast
,, 8	29·97	E.	...	120	77	60	60	62	Cloudy
,, 9	30·05	N.E.	...	120	78	58	57	61	Overcast
,, 10	30·18	N.E.	...	111	74	56	60	62	Bright

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (19th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1899, which was completed with the issue of June 24th, and the Title-page to the Volume, were given in THE LANCET of July 1st.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1899 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

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(5) As a Mouth-wash in Cancer of the Mouth and Tongue;
(6) For Purifying and Refreshing the Air of Sick-rooms;
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The "SANITAS" Preparations comprise Fluid, Oil, Gauze, Wool, Lint, Bandages, Rolls, Cream, Jelly, Soaps, &c., &c.

Jealous individuals and rival manufacturers of poisonous preparations have done their utmost to spread abroad the false impression that because the "Sanitas" preparations are non-poisonous and pleasant they are non-effective, but the fact is, as Mr. C. G. MOOR, M.A.Cantab., F.I.C. (joint author of the work on "Applied Bacteriology") has summed up his practical and exact investigation, that "the "'Sanitas' preparations are thoroughly reliable when employed in the strengths and "for the purposes specified on the directions issued by the proprietors, while their "non-poisonous nature and pleasant character render them applicable in many "instances where such substances as carbolic acid or mercuric chloride would be "inadmissible or dangerous."

Copies of Mr. Moor's Bacteriological Report, Samples, and full information may be obtained on application.

THE "SANITAS" CO., LTD., BETHNAL GREEN, LONDON, E.C.

JOHANNIS POTASH WATER

Each small bottle guaranteed to contain 7½ grs. of Potassium Bicarbonate.

The remedial value of **Potash Water** has been established by long experience.

Salts of Potash enter, as necessary constituents, into all the tissues and fluids of the body, and Potash Salts are therefore necessary constituents of our foods.

Man cannot live in a healthy state on foods which do not contain a proper proportion of Potassium compounds. When the tissues of the body become poor in alkaline constituents and the secretions become unduly acid, the addition of an alkaline Potash salt is a natural and rational remedy, hence doubtless the growing popularity of Potash Waters.

The Manufactured Potash Waters of commerce, a number of which have been analysed for the purpose, have been found to contain amounts of Potassium Bicarbonate which vary to an astonishing degree.

For these reasons it has been thought advisable to prepare a "Johannis Potash," corresponding with the "Johannis Lithia," which shall contain a definite, moderate, but adequate and unvarying quantity of Potash suitable for a Table Water in regular and constant use.

This quantity has been fixed, after consultation with the highest medical authorities, at 7½ grains per small bottle of 360 grammes, or 10 fluid ounces.

> "An agreeable and effective way of exhibiting an alkaline draught. Johannis potash water possesses a taste distinctly superior to and more satisfactory than the ordinary potash water made with artificial gas. It is smooth and soft to the palate and affords an excellent beverage. Johannis potash water offers the advantage where alkaline treatment is indicated of presenting a constant amount of the potash salt, which as is well known is useful as a diuretic and in preserving the alkalinity of the blood."
>
> —THE LANCET, *22nd July, 1899.*

JOHANNIS-LITHIATED. For all Gouty Affections.

OF ALL CHEMISTS & MINERAL WATER DEALERS.

SOLE IMPORTERS: THE APOLLINARIS COMPANY, LTD., LONDON, W.

HOMMEL'S HÆMATOGEN

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Purified and Concentrated HÆMOGLOBIN flavoured with Chemically Pure GLYCERINE and MALAGA WINE, in the proportion of Four Ounces of Glycerine and Two Ounces of Wine in each Pint.

HOMMEL'S HÆMATOGEN contains (1) perfectly pure Hæmoglobin, (2) the whole of the Salts which are found in Fresh Blood, and (3) the highly important Albuminous Constituents of the Serum of the Blood in a Concentrated and Purified form, neither Decomposed nor Predigested.

A MOST EFFICACIOUS REMEDY

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NEVER PRODUCES VASCULAR EXCITEMENT OR THROBBING OF THE TEMPLES (ORGASMUS).

UNSURPASSED AS A MEDICINE FOR CHILDREN.

Beware of Imitations of HOMMEL'S HÆMATOGEN which are offered to the public under names similar to that of the genuine preparation. Some of these imitations contain ether, and on that account are positively injurious to children and to nervous or sensitive patients.

SOME RECENT MEDICAL OPINIONS:-

"I have never known the digestion suffer through the taking of Hommel's Hæmatogen. In reference to this, I may make particular mention of a case in which a lady after an attack of inflammation of the bowels became very reduced and anæmic and completely lost her appetite, but by taking Hæmatogen for two months she gained 14 lb. in weight." DR. D. EMIL MEYER, *Bad Grund i. Harz, Hanover.*

"I prescribe Hommel's Hæmatogen by preference in cases where a medicine of this kind is indicated, especially in Anæmia, Scrofula, &c. Its action is remarkable and most satisfactory." DR. MARTON, *Budapest.*

"I am very pleased with Hommel's Hæmatogen. I gave this preparation to a patient who had been suffering for twelve years from Suppurating Tuberculous Disease of the Bones and was consequently worn to a shadow. After fourteen days I found that he had gained in weight about 6 lb., his appetite, which previously was very poor, had returned in a gratifying manner, his general condition was greatly improved, and the suppuration was distinctly lessened. He took the Hæmatogen with relish, and it has not up to the present time produced any unpleasant after-effects. I will therefore continue to keep him on it, and will also prescribe it freely in my practice." DR. W. WEVER, *Schriesheim, Baden.*

"I have used Dr. Hommel's Hæmatogen very largely since trying those two bottles sent, and with most remarkable results. It has saved the life of one patient who appeared to be dying from pernicious anæmia." F. E. W——, M.B., B.Ch., B.A.O.Dub. "LONDON.

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KEPT IN STOCK BY ALL PHARMACEUTICAL CHEMISTS. SPECIAL PRICE TO THE PROFESSION.

DOSE.—For Young Infants: Half a Teaspoonful or One Teaspoonful twice a day in milk of the proper heat for drinking. For Children: One Tablespoonful, either pure or mixed with any convenient liquid. For Adults: One Tablespoonful twice a day before food, so as to secure the full benefit of its powerful appetising effect.

NICOLAY & CO., 36 & 36a, St. Andrew's Hill, London, E.C.

45

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